### Requested Document(s)

Attn: .  
From: .  
Comments: SDS LINES: 101-126

<table>
<thead>
<tr>
<th>ITEM CODE</th>
<th>DESCRIPTION</th>
<th>SIZE</th>
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<td>SCH6778</td>
<td>COE SOFT PROF PACKAGE OD</td>
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<td>SCH8753</td>
<td>FIXODENT</td>
<td>EA</td>
<td>2.4OZ</td>
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<td>MAXITAB ULTRASNC CLN TABS</td>
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<td>PVT LBL</td>
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<td>SCK6465</td>
<td>AC CLEAN PASTE RASPBRY FIN</td>
<td>BX/200</td>
<td>PVT LBL</td>
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<tr>
<td>SCK8640</td>
<td>NATURAL ELEGANCE NANO A2</td>
<td>PK/2</td>
<td>PVT LBL</td>
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<tr>
<td>SCK8696</td>
<td>LYNAL TISSUE CONDITNR OD</td>
<td>EA</td>
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<tr>
<td>1002124</td>
<td>SUN-SCHEIN INTRODUCTOR SQ</td>
<td>EA</td>
<td>SYRINGE</td>
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<tr>
<td>1234778</td>
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<tr>
<td>1860135</td>
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<td>1955429</td>
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<td>2OZ/BT</td>
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<td>3331927</td>
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<td>A3</td>
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<td>3333526</td>
<td>FUJI IX GP EXT CAP STR SQ</td>
<td>EA</td>
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<td>3780532</td>
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<td>5751330</td>
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<td>5830899</td>
<td>POLIDENT FOR PARTIALS</td>
<td>12/CA</td>
<td>40COUNT</td>
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<td>6420226</td>
<td>COMP OIL 16OZ</td>
<td>6BT/CA</td>
<td>COMPRES</td>
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<tr>
<td>6650090</td>
<td>GLUMA DESSENSITIZER S/DOSE</td>
<td>40/PK</td>
<td>0.075ML</td>
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<tr>
<td>8562130</td>
<td>COOK-WAITE MARCAINE 0.5%</td>
<td>50/BX</td>
<td>1:200</td>
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<tr>
<td>9450042</td>
<td>HELIOPROGRESS BASIC SHADE</td>
<td>3/BX</td>
<td>32BG/D4</td>
</tr>
</tbody>
</table>
Safety Data Sheet

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Product identifier
PERMADYNE LOW/DUENN KIT

ID Number(s):
70-2011-0278-0, 70-2011-0279-8, 70-2011-0638-5, 70-2011-0639-3

Recommended use
Dental impressions

Restrictions on use
For use only by dental professionals

Supplier's details
MANUFACTURER: 3M
DIVISION: 3M ESPE Dental Products
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:
16-5629-7, 16-2608-4

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In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.  

3M USA SDSs are available at www.3M.com
SECTION 1: Identification

1.1. Product identifier
3M™ ESPE™ PERMADYNE LOW, PERMADYNE DUENN, PERMADYNE PENTA L BASE

Product Identification Numbers
LE-FSFD-3001-0, 70-2011-0634-4, EF-SFD6-3001-0

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Impression material

Restrictions on use
For use only by Dental Professionals

1.3. Supplier’s details

MANUFACTURER: 3M
DIVISION: Oral Care Solutions Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.
Skin Sensitizer: Category 1A.

2.2. Label elements

Signal word
Warning

Symbols
Pictograms

**Hazard Statements**
Causes eye irritation.
May cause an allergic skin reaction.

**Precautionary Statements**

**Prevention:**
Wear protective gloves.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

**Response:**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.

**Disposal:**
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**2.3. Hazards not otherwise classified**
None.

### SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLYETHER</td>
<td>110531-92-5</td>
<td>70 - 80 Trade Secret *</td>
</tr>
<tr>
<td>DIBENZYL TOLUENE</td>
<td>26898-17-9</td>
<td>10 - 20 Trade Secret *</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>68855-54-9</td>
<td>1 - 10 Trade Secret *</td>
</tr>
<tr>
<td>FATTY ACIDS TRIGLYCERIDES</td>
<td>67701-27-3</td>
<td>1 - 10 Trade Secret *</td>
</tr>
<tr>
<td>C.I. PIGMENT WHITE 5</td>
<td>1345-05-7</td>
<td>&lt; 2 Trade Secret *</td>
</tr>
<tr>
<td>1-DODECYLIMIDAZOLE</td>
<td>4303-67-7</td>
<td>&lt; 1 Trade Secret *</td>
</tr>
</tbody>
</table>

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

### SECTION 4: First aid measures

**4.1. Description of first aid measures**

**Inhalation:**
Remove person to fresh air. If you feel unwell, get medical attention.
Skin Contact:
Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Irritant Vapors or Gases</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Do not get in eyes. A no-touch technique is recommended. If
skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls
Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
See Section 7.1 for additional information on skin protection.

Respiratory protection
None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
General Physical Form:
   Solid
Specific Physical Form:
   Paste
Odor, Color, Grade:
   characteristic odor, orange colored, paste
Odor threshold
   No Data Available
pH
   Not Applicable
Melting point
   No Data Available
Boiling Point
   Not Applicable
Evaporation rate
   Not Applicable
Flammability (solid, gas)
   Not Classified
Flammable Limits(LEL)
   Not Applicable
Flammable Limits(UEL)
   Not Applicable
Vapor Pressure
   Not Applicable
Vapor Density
   Not Applicable
Density
   No Data Available
Specific Gravity
   >= 1 [Ref Std: WATER=1]
Solubility in Water
   Negligible
Solubility- non-water
   No Data Available
Partition coefficient: n-octanol/ water
   No Data Available
SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Strong acids
Strong bases
Strong oxidizing agents

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
No known health effects.

**Skin Contact:**
May be harmful in contact with skin.
  Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**
May be harmful if swallowed.
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

**Toxicological Data**
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Dermal</td>
<td>No data available; calculated ATE 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td>No data available; calculated ATE 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>POLYETHER</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>POLYETHER</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>DIBENZYL TOLUENE</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>DIBENZYL TOLUENE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 10,360 mg/kg</td>
</tr>
<tr>
<td>FATTY ACIDS TRIGLYCERIDES</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>FATTY ACIDS TRIGLYCERIDES</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 2.7 mg/l</td>
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<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>C.I. PIGMENT WHITE 5</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 15,000 mg/kg</td>
</tr>
<tr>
<td>C.I. PIGMENT WHITE 5</td>
<td>Dermal</td>
<td>similar compounds</td>
<td>LD50 &gt; 1,000 mg/kg</td>
</tr>
<tr>
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<td>Inhalation-Dust/Mist (4 hours)</td>
<td>similar compounds</td>
<td>LC50 &gt; 2.52 mg/l</td>
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<tr>
<td>1-DODECYLIMIDAZOLE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 641 mg/kg</td>
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</tbody>
</table>

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

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<th>Name</th>
<th>Species</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>POLYETHER</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>In vitro data</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>1-DODECYLIMIDAZOLE</td>
<td>Rabbit</td>
<td>Mild irritant</td>
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</tbody>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
</table>

Page 6 of 9
### Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLYETHER</td>
<td>Guinea pig</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Mouse</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>1-DODECYLIMIDAZOLE</td>
<td>Mouse</td>
<td>Sensitizing</td>
</tr>
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</table>

### Respiratory Sensitization

For the component/components, either no data are currently available or the data are not sufficient for classification.

### Germ Cell Mutagenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLYETHER</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>1-DODECYLIMIDAZOLE</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
</tbody>
</table>

### Carcinogenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation</td>
<td>Human and animal</td>
<td>Carcinogenic</td>
</tr>
</tbody>
</table>

### Reproductive Toxicity

**Reproductive and/or Developmental Effects**

For the component/components, either no data are currently available or the data are not sufficient for classification.

### Target Organ(s)

**Specific Target Organ Toxicity - single exposure**

For the component/components, either no data are currently available or the data are not sufficient for classification.

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation</td>
<td>silicosis</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Human</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hematopoietic system</td>
<td>eyes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rat</td>
</tr>
</tbody>
</table>

### Aspiration Hazard

For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

### SECTION 12: Ecological information

Ecotoxicological information
Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

**Chemical fate information**

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

### SECTION 13: Disposal considerations

13.1. **Disposal methods**
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility.

**EPA Hazardous Waste Number (RCRA):** D005 (Barium)

### SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

### SECTION 15: Regulatory information

**15.1. US Federal Regulations**
Contact 3M for more information.

**311/312 Hazard Categories:**

Fire Hazard - No  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - No

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.I. PIGMENT WHITE 5 (Barium compounds, except barium sulfate)</td>
<td>1345-05-7</td>
<td>&lt; 2</td>
</tr>
<tr>
<td>C.I. PIGMENT WHITE 5 (ZINC COMPOUNDS)</td>
<td>1345-05-7</td>
<td>&lt; 2</td>
</tr>
</tbody>
</table>

**15.2. State Regulations**
Contact 3M for more information.

**15.3. Chemical Inventories**
The components of this product are in compliance with the new substance notification requirements of CEPA.

This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

**15.4. International Regulations**
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.
SECTION 16: Other information

NFPA Hazard Classification
Health: 2 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group: 16-5629-7 Version Number: 4.00
Issue Date: 02/25/16 Supercedes Date: 02/03/15

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Safety Data Sheet

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Document Group: 16-2608-4
Issue Date: 02/25/16
Version Number: 7.00
Supercedes Date: 12/16/14

SECTION 1: Identification

1.1. Product identifier
3M™ ESPE™ PERMADYNE CATALYST

Product Identification Numbers
70-2011-1121-1

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Impression material

Restrictions on use
For use only by dental professionals

1.3. Supplier’s details
MANUFACTURER: 3M
DIVISION: Oral Care Solutions Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

2.1. Hazard classification
Serious Eye Damage/Irritation: Category 2B.
Specific Target Organ Toxicity (central nervous system): Category 3.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |

Pictograms

Hazard Statements
Causes eye irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
Use only in a well-ventilated area.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:
Store in a well-ventilated place. Keep container tightly closed.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
None.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITRIC ESTER</td>
<td>77-90-7</td>
<td>30 - 40 Trade Secret *</td>
</tr>
<tr>
<td>SULFONIUM SALT</td>
<td>72140-65-9</td>
<td>25 - 35 Trade Secret *</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>68909-20-6</td>
<td>10 - 20 Trade Secret *</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>68855-54-9</td>
<td>5 - 10 Trade Secret *</td>
</tr>
<tr>
<td>POLYETHYLENE-POLYPROPYLENE GLYCOL</td>
<td>9003-11-6</td>
<td>5 - 10 Trade Secret *</td>
</tr>
</tbody>
</table>

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.
Skin Contact:
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Irritant Vapors or Gases</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid prolonged or repeated skin contact. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (e.g. chlorine, chromic acid etc.)
7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls
Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
See Section 7.1 for additional information on skin protection.

Respiratory protection
Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

General Physical Form: Solid
Specific Physical Form: Paste
Odor, Color, Grade: slight characteristic odor, red paste
Odor threshold: No Data Available
pH: No Data Available
Melting point: No Data Available
Boiling Point: Not Applicable
Flash Point: Flash point > 93 °C (200 °F)
Evaporation rate: Not Applicable
Flammability (solid, gas): Not Classified
Flammable Limits(LEL): Not Applicable
Flammable Limits(UEL): Not Applicable
Vapor Pressure: Not Applicable
Vapor Density: Not Applicable
Density: 1.1 - 1.4 g/cm3
Specific Gravity: > 1 [Ref Std: WATER=1]
Solubility in Water: Negligible
Solubility- non-water: No Data Available
Partition coefficient: n-octanol/ water: No Data Available
### SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Strong acids
Strong bases
Strong oxidizing agents

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

Refer to section 5.2 for hazardous decomposition products during combustion.

### SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

11.1. Information on Toxicological effects

**Signs and Symptoms of Exposure**

Based on test data and/or information on the components, this material may produce the following health effects:

**Inhalation:**
This product may have a characteristic odor; however, no adverse health effects are anticipated.

**Skin Contact:**
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

**Eye Contact:**
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

**Additional Health Effects:**

**Single exposure may cause target organ effects:**
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Carcinogenicity:**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Class Description</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILICA, CRYSTAL AIRRESP</td>
<td>68855-54-9</td>
<td>Grp. 1: Carcinogenic to humans</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>SILICA, CRYSTAL AIRRESP</td>
<td>68855-54-9</td>
<td>Known human carcinogen</td>
<td>National Toxicology Program Carcinogens</td>
</tr>
</tbody>
</table>

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Dermal</td>
<td>No data available; calculated ATE &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td>No data available; calculated ATE &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>SULFONIUM SALT</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>SULFONIUM SALT</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>CITRIC ESTER</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>CITRIC ESTER</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 25,000 mg/kg</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 0.691 mg/l</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 5,110 mg/kg</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 2.7 mg/l</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>POLYETHYLENE-POLYPROPYLENE GLYCOL</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>POLYETHYLENE-POLYPROPYLENE GLYCOL</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 5,700 mg/kg</td>
</tr>
</tbody>
</table>
ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFONIUM SALT</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>In vitro data</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

**Serious Eye Damage/Irritation**

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFONIUM SALT</td>
<td>similar health hazards</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
</tbody>
</table>

**Skin Sensitization**

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Human and animal</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Mouse</td>
<td>Not sensitizing</td>
</tr>
</tbody>
</table>

**Respiratory Sensitization**

For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFONIUM SALT</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

**Carcinogenicity**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Not Specified</td>
<td>Mouse</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation</td>
<td>Human and animal</td>
<td>Carcinogenic</td>
</tr>
</tbody>
</table>

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Ingestion</td>
<td>Not toxic to female reproduction</td>
<td>Rat</td>
<td>NOAEL 509 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Ingestion</td>
<td>Not toxic to male reproduction</td>
<td>Rat</td>
<td>NOAEL 497 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Ingestion</td>
<td>Not toxic to development</td>
<td>Rat</td>
<td>NOAEL 1,350 mg/kg/day</td>
<td>during organogenesis</td>
</tr>
</tbody>
</table>

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**
### Specific Target Organ Toxicity - repeated exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFONIUM SALT</td>
<td>Ingestion</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td>Rat</td>
<td>LOAEL 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>silicosis</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation</td>
<td>silicosis</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Ingestion</td>
<td>hematopoietic system</td>
<td>eyes</td>
<td>All data are negative</td>
<td>Rat</td>
<td>NOAEL 3,738 mg/kg/day</td>
</tr>
</tbody>
</table>

### Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

### SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information

Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

### SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

EPA Hazardous Waste Number (RCRA): Not regulated

### SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

### SECTION 15: Regulatory information

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - No  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - No

**15.2. State Regulations**
Contact 3M for more information.

**15.3. Chemical Inventories**
The components of this product are in compliance with the new substance notification requirements of CEPA.

This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

**15.4. International Regulations**
Contact 3M for more information.

>This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**SECTION 16: Other information**

**NFPA Hazard Classification**
Health: 1  Flammability: 1  Instability: 0  Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

**Document Group:** 16-2608-4  **Version Number:** 7.00
**Issue Date:** 02/25/16  **Supercedes Date:** 12/16/14

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3M USA SDSs are available at www.3M.com
This Material Safety Data Sheet for Aluminum Oxide Rubber Bonded Abrasive Discs & Wheels covers all of the items listed below:

1. Red Flash Discs and Wheels
2. Dura-Thin
3. High Speed Discs
4. Cutoff Wheels: 1 ½ .025, 1 ½ .040, 1 ¼ .062
5. Mizzy Red Heatless Wheels
6. Mizzy White Heatless Wheels
7. Roughing Discs

See attached sheets for ingredients that are contained in the above products.
Grinding Wheel:
A wheel in which abrasive particles are embedded into, and held together by, a matrix or bond.

Purposes:
- Remove material (Mounted Stone, Mizzy Heatless Wheel)
- Cut material (Cutoff Wheels, Red Flash Discs and Ultra-Thin)
- Finish (polish)

Bond Types:
- Vitrified Inorganic Bonds
- Oxichloride
- Resin Organic Bonds
- Rubber

Rubber Grades:
- Soft Rubber: Pliable, i.e. Rubber Wheels, Kegold Wheels, Clasp Polishers

Abrasive Types:
- Aluminum Oxide: (red, brown, white) Primarily used on metallics
- Silicon Carbide: (black, green) Primarily used on non-metallics

Contamination:
Silicon carbide abrasive is non-contaminating – cannot cause bubbles. The danger of contamination today is practically negligible since firing is done in a vacuum.

Abrasive Grit Size:
- Medium – 90 to 150
- Fine – 180 to 240
- X Fine – 280 – 320

Operating Speeds:
Wheels are rated in Surface Feet Per Minute (SFM) which is converted to Revolutions Per Minute (RPM).

Rating factors are: Diameter
- Bond Type
- Overhang (mounted & unmounted points)

All Keystone items 1 ½” diameter and less are rated at 30,000 RPM. Rubber points are rated at 30,000 RPM with a ½” overhang or less.
Section 1 – Identification of the Substance/Preparation and of the Company/Undertaking

Product Name: ALUMINUM OXIDE RUBBER BONDED ABRASIVE DISCS & WHEELS

Chemical Name:

Family: Abrasive Products inc: Red Flash Discs & Wheels, Dura-Thin, High Speed Discs, Cutoff Wheels, Knife Edge Wheels, Mizzy Red & White Heatless Wheels

Product Use: -- Various

Section 2 - Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS Numbers</th>
<th>EINECS#</th>
<th>INCI Name</th>
<th>Exposure OSHA TWA/STEL</th>
<th>Limits ACGIH TWA/STEL</th>
<th>Carcinogen</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Oxide</td>
<td>1344-28-1</td>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>10 mg.m³</td>
<td>N/A</td>
<td>&lt;80%</td>
</tr>
<tr>
<td>Iron Oxide</td>
<td>1309-37-1</td>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>10 mg.m³</td>
<td>N/A</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Titanium Oxide</td>
<td>13463-67-7</td>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>10 mg.m³</td>
<td>N/A</td>
<td>&lt;10%</td>
</tr>
<tr>
<td>Acrylonitrile</td>
<td>107-1-3</td>
<td></td>
<td></td>
<td>&gt; 1 ppm</td>
<td>N/A</td>
<td>&lt;0.0001%</td>
<td></td>
</tr>
<tr>
<td>Butadiene</td>
<td>106-99-0</td>
<td>67700-42-9</td>
<td></td>
<td>&gt; 0.02 ppm</td>
<td>N/A</td>
<td>&lt;0.0001%</td>
<td></td>
</tr>
<tr>
<td>Cashew, nutshell liquid, polymer with formaldehyde and phenol</td>
<td>67700-42-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hazard Symbols: Risk Phrases: Safety Phrases

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
This information is based on findings from related or similar materials.

- This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product’s directions for use may affect the performance of the product and may present potential health and safety hazards.

Potential Health Effects, Signs and Symptoms of Exposure:

Primary Route of Entry Eyes, inhalation

Eye Dust may irritate eyes.

Skin Some may experience skin irritation from dust.

Ingestion No known adverse effects but, ingestion not recommended.

Inhalation Acute: Coughing, shortness of breath. Chronic: May affect breathing capacity.

Other Grinding may create elevated sound levels which may affect hearing.

Sub-Chronic Effects

NOTE: Refer to Section 11, Toxicological Information for Details

Section 4 - First Aid Measures

First Aid for Eye Wash with large amounts of water. Obtain first aid and medical assistance if needed.

First Aid for Skin Wash affected areas with soap and water.

First Aid for Inhalation Remove person to fresh air. Apply artificial respiration as needed. Obtain medical assistance.

First Aid for Ingestion Obtain medical assistance.

Section 5 - Fire Fighting Measures

<table>
<thead>
<tr>
<th>Flash Point (°F/°C)</th>
<th>Flammable Limit (vol%)</th>
<th>Auto-ignition Temperature (vol%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>LEL: N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Section 6 - Accidental Release Measures

Spill or Release Procedures: Normal clean-up procedures

Section 7 - Handling and Storage

Handling: Normal use – handle with adequate ventilation
Storage: Normal dry storage

Section 8 - Exposure Controls / Personal Protective Equipment

Engineering Controls

Personal Protective Equipment

General: Local exhaust and ventilation recommended.
Eye/ Face Protection: Recommended. See OSHA 29 CFR 1910.133 – Face and Eye Protection
Skin Protection: Protective gloves as desired by user.
Respiratory Protection: As needed. For approved dust respirators, see OSHA 29 CFR 1910.134 – Respiratory Protection.

Section 9 - Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Odor &amp; Odor Threshold</th>
<th>pH</th>
<th>Specific Gravity ($H_2O = 1$)</th>
<th>Viscosity</th>
<th>% Volatile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid, coated abrasive product</td>
<td>May produce odor in use.</td>
<td>N/A</td>
<td>2 - 4</td>
<td>No applicable information found</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point/ Freezing Point</th>
<th>Decomposition Temperature</th>
<th>Octanol/Water Partitioning Coefficient Log Po/w</th>
<th>Vapor Pressure (mm Hg):</th>
<th>Vapor Density (AIR = 1)</th>
<th>Evaporation Rate (Butyl Acetate = 1)</th>
<th>Ignition</th>
<th>Solubility In Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>No applicable information found</td>
<td>No applicable information found</td>
<td>No applicable information found</td>
<td>Slight</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point ($°F/°C$)</th>
<th>Flammable Limit (vol%)</th>
<th>Auto-ignition Temperature (vol%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>LEL – N/A</td>
<td>UEL – N/A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

Section 10 - Stability and Reactivity

Stability: Stable
Hazardous Decomposition Products:
Dust is generated in use. In most cases, the material removed from the work piece will be significantly greater than the grinding wheel components.
Conditions to Avoid:
No applicable information found

Section 11 - Toxicological Information

Acute Oral Toxicity | Acute Dermal Toxicity | Acute Inhalation Toxicity | Irritation - skin | Irritation - Eye

Revised Date: 11/15/06 | Replaces Date: 7/2002
## Section 12 - Ecological Information

### Ecotoxicological Information

<table>
<thead>
<tr>
<th>Acute Toxicity To Fish</th>
<th>Acute Toxicity to Invertebrates</th>
<th>Acute Toxicity to Algae</th>
<th>Bioconcentration</th>
<th>Toxicity to Sewage Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>No toxicological information determined.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Chemical Fate Information

<table>
<thead>
<tr>
<th>Biodegradability</th>
<th>Chemical Oxygen Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>No chemical fate information determined</td>
<td>No chemical fate information determined</td>
</tr>
</tbody>
</table>

### Environmental Fate Information

### Section 13 - Disposal Considerations

| Standard landfill methods consistent with applicable Local, State and Federal laws. |

### Section 14 - Transport Information

<table>
<thead>
<tr>
<th>Proper Shipping Name:</th>
<th>Not regulated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification Number:</td>
<td></td>
</tr>
<tr>
<td>Marine Pollutant:</td>
<td></td>
</tr>
<tr>
<td>Special Provisions:</td>
<td></td>
</tr>
</tbody>
</table>

**Emergency Response Guidebook (ERG) #:**

### Section 15 - Regulatory Information

#### US Federal Regulations

<table>
<thead>
<tr>
<th>Clean Air Act: HAP/ODS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Water Act:</td>
<td></td>
</tr>
<tr>
<td>FDA: Food Packaging Status</td>
<td></td>
</tr>
<tr>
<td>Occupational Safety and Health Act</td>
<td></td>
</tr>
<tr>
<td>RCRA</td>
<td>●</td>
</tr>
<tr>
<td>SARA Title III: Section 302 (TPQ)</td>
<td></td>
</tr>
<tr>
<td>SARA Title III: Section 302 (RQ)</td>
<td></td>
</tr>
<tr>
<td>SARA Title III: Section 311-312:</td>
<td>Fire hazard – yes, Pressure hazard – no, Reactivity hazard – no, Immediate hazard - yes, Delayed hazard – no</td>
</tr>
<tr>
<td>SARA Title III: Section 313:</td>
<td>None</td>
</tr>
<tr>
<td>TSCA Section 8(b): Inventory:</td>
<td></td>
</tr>
<tr>
<td>TSCA Significant New Use Rule:</td>
<td></td>
</tr>
</tbody>
</table>

Revised Date: 11/15/06 | Replaces Date: 7/2002
Material Safety Data Sheet  
ALUMINUM OXIDE 
RUBBER BONDED ABRASIVE DISCS 

State Regulations

CA Right-to-Know Law: 
California No Significant Risk Rule: 
MA Right-to-Know Law: 
NJ Right-to-Know Law: 
PA Right-to-Know Law: 
FL Right-to-Know Law: 
MN Right-to-Know Law: 

International Regulations

CDSL: Canadian Inventory (On Canadian Transitional List) 
EINECS: European Inventory: 
- HAZARD SYMBOLS:;
- RISK PHRASES
- SAFETY PHRASES:

Section 16 - Other Information
Hazard Rating System (Pictograms)

NFPA: 
- Flammability: 0
- Health: 1
- Reactivity: 0 

HMIS: 
- Health: 1
- Flammability: 0
- Reactivity: 0

Issue Date: 10/27/05 
Review Date: September 2006 
Revised Sections since Last Version: Overall format revision 

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~Verified on 2012-11 by Henry Schein to be the most current version of the MSDS. To be verified again on 2015-11. ~
1. Identification of the Material and Supplier

Product Name: Retreat™ without epinephrine
Product Use: Medicated Gingival Retraction Cord
Distributor Name: Henry Schein, Inc.
Address: 135 Duryea Road
Melville, NY 11747
Emergency (Chemtrec): 1-800-424-9300
Telephone: 1-800-472-4346

2. Hazards Identification

Acute & Chronic Hazards: Irritating to eyes, respiratory system and skin. Minimal amounts normally ingested are not harmful.
Risk Phrases: R36/37/38: Irritating to eyes, respiratory system and skin
Safety Phrases: S24: Avoid contact with skin
S37: Wear suitable gloves

3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Entity (Components)</th>
<th>CAS No.</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum Sulfate, USP</td>
<td>10043-01-3</td>
<td>0.35 to 0.60 mg/in (#1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.70 to 1.00 mg/in (#2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.20 to 1.70 mg/in (#3)</td>
</tr>
</tbody>
</table>

4. First Aid Measures

Inhalation: Remove to fresh air
Ingestion: N/A
Skin: Flush well with water for at least 15 minutes.
Eye: Flush well with water for at least 15 minutes.
First Aid Facilities: Seek Medical assistance for further treatment, observation and support if necessary.

5. Fire Fighting Measures

Extinguishing Media: Suitable extinguishing media for the surrounding fire should be used.
Specific Hazards: None
Precautions in connection with fire: Use of self contained breathing apparatus is recommended. Wear protective clothing to prevent contact with skin and eyes.
6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures: N/A
Clean Up Procedure: Sweep area and clean with soapy water.

7. HANDLING AND STORAGE

Handling: Use original container.
Storage: Store in cool, well ventilated area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits: Not determined
Respiratory Protection: N/A
Eye Protection: Safety glasses/goggles
Hand Protection: Protective gloves
Engineering controls: Standard room ventilation

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green twisted cotton cord
Odor: None
pH: Not determined
Vapor Pressure: Not determined
Vapor Density: Not determined
Boiling Point: Not determined
Freezing / Melting Point: Not determined
Solubility in Water: Cord is not water soluble; aluminum sulfate is highly water soluble.
Specific Gravity: Not determined
Flash Point: Not determined
Flammability: Not determined

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under ordinary conditions of use and storage
Conditions to Avoid: High Heat
Incompatible Materials: None known
Hazardous Decomposition: None known
Products:
Hazardous Reactions: None known

11. TOXICOLOGICAL INFORMATION
Hazardous Ingredient: Aluminum Sulfate Mixture
LD<sub>50</sub> (orally) MICE: 6207 mg/kg
Routes of Exposure: Refer to Section 4 of MSDS

12. ECOLOGICAL INFORMATION

Ecotoxicity: No known effects
Persistence and Degradability: No information found

13. DISPOSAL CONSIDERATIONS

Disposal Method and Containers: Empty containers may be disposed of in waste containers.
Special Precautions: Disposal should be carried out in compliance with federal, state, and local regulations.

14. TRANSPORT INFORMATION

Not a dangerous good: Not regulated
Hazchem code: None allocated

15. REGULATORY INFORMATION

Precautionary Phrases: For professional in-office use only. Keep out of reach of children.
AICS (Australia): All ingredients are listed
Poison Schedule: None allocated
Note: Refer to applicable international, national, and local regulations and provisions.

16. OTHER INFORMATION

Legal Disclaimer: Information contained in this MSDS is based on data believed to be correct. This information does not purport to be all inclusive and shall be used only as a guide. No warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. In no event will the manufacturer or the distributor be responsible for damages of any nature whatsoever resulting from the use of or reliance upon this information.

MSDS History
Date of Issue: November 10, 2014
Replaces Issue: April 16, 2012
Changes made to previous issue: MSDS to SDS
Product Name: Retreat™ without epinephrine
Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 30601 POLYETHER ADHESIVE - 17 ML BOTTLE (NA)
MANUFACTURER: 3M
DIVISION: 3M ESPE Dental Products
ADDRESS: 3M Center
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 03/02/11
Supercedes Date: 04/09/10
Document Group: 16-4015-0

Product Use:
Intended Use: Dental Product
Limitations on Use: For use only by dental professionals.
Specific Use: Used in impressioning systems.

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ACETATE</td>
<td>141-78-6</td>
<td>25 - 50</td>
</tr>
<tr>
<td>HEPTANE</td>
<td>142-82-5</td>
<td>25 - 35</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>5 - 15</td>
</tr>
<tr>
<td>METHYLCYCLOHEXANE</td>
<td>108-87-2</td>
<td>5 - 10</td>
</tr>
<tr>
<td>FORMALDEHYDE, POLYMER WITH 1,3-BENZENEDIOL AND 4-(1,1-DIMETHYLETHYL)PHENOL</td>
<td>59633-97-5</td>
<td>0 - 5</td>
</tr>
<tr>
<td>POLYCHLOROPRENE</td>
<td>9010-98-4</td>
<td>0 - 5</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Liquid
Odor, Color, Grade: Blue in color, characteristic solvent odor.
General Physical Form: Liquid

~Verified on 2014-04 by Henry Schein to be the most current version of the SDS. To be verified again on 2017-04. ~
Immediate health, physical, and environmental hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. May cause target organ effects. This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:
Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.
If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

### SECTION 5: FIRE FIGHTING MEASURES

#### 5.1 FLAMMABLE PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>30 °F [Test Method: Closed Cup]</td>
</tr>
<tr>
<td>Flammable Limits(LEL)</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flammable Limits(UEL)</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>

#### 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

#### 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

*Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.*

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

#### 6.2. Environmental precautions

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

**Clean-up methods**

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible using non-sparking tools. Clean up residue with detergent and water. Seal the container.
In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING
Avoid eye contact. Contents may be under pressure, open carefully. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Avoid skin contact.

7.2 STORAGE
Store away from heat. Store out of direct sunlight. Keep container in well-ventilated area. Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use in an enclosed process area is recommended. Use in a well-ventilated area. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection
The following eye protection(s) are recommended: Safety Glasses with side shields.

8.2.2 Skin Protection
Avoid skin contact.

8.2.3 Respiratory Protection
Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

8.2.4 Prevention of Swallowing
Not applicable. Do not ingest.

8.3 EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACETONE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>ACETONE</td>
<td>ACGIH</td>
<td>STEL</td>
<td>750 ppm</td>
<td></td>
</tr>
<tr>
<td>ACETONE</td>
<td>OSHA</td>
<td>TWA</td>
<td>2400 mg/m3</td>
<td></td>
</tr>
<tr>
<td>ETHYL ACETATE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>400 ppm</td>
<td></td>
</tr>
<tr>
<td>ETHYL ACETATE</td>
<td>OSHA</td>
<td>TWA</td>
<td>1400 mg/m3</td>
<td></td>
</tr>
<tr>
<td>HEPTANE</td>
<td>OSHA</td>
<td>TWA</td>
<td>2000 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Heptane, all isomers</td>
<td>ACGIH</td>
<td>TWA</td>
<td>400 ppm</td>
<td></td>
</tr>
<tr>
<td>Heptane, all isomers</td>
<td>ACGIH</td>
<td>STEL</td>
<td>500 ppm</td>
<td></td>
</tr>
<tr>
<td>METHYLCYCLOHEXANE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>400 ppm</td>
<td></td>
</tr>
</tbody>
</table>
### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Physical Form:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor, Color, Grade:</td>
<td>Blue in color, characteristic solvent odor.</td>
</tr>
<tr>
<td>General Physical Form:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>30 °F [Test Method: Closed Cup]</td>
</tr>
<tr>
<td>Flammable Limits(LEL)</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flammable Limits(UEL)</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>133 °F</td>
</tr>
<tr>
<td>Density</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>2 - 4 [Ref Std: AIR=1]</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>180 mmHg</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.8 - 0.9 [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>pH</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Moderate</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Approximately 1 [Ref Std: BUOAC=1]</td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Kow - Oct/Water partition coef</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>No Data Available</td>
</tr>
<tr>
<td>VOC Less H2O &amp; Exempt Solvents</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>40000 centipoise</td>
</tr>
</tbody>
</table>

### SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

**Materials and Conditions to Avoid:**

10.1 Conditions to avoid

- Heat
- Sparks and/or flames

10.2 Materials to avoid

None known

**Hazardous Polymerization:** Hazardous polymerization will not occur.
Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Irritant Vapors or Gases</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Incinerate in a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):
70-2011-0648-4, 70-2011-0895-1, 70-2011-0997-5

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
Contact 3M for more information.
311/312 Hazard Categories:
Fire Hazard - Yes  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - No

This material contains a chemical which requires export notification under TSCA Section 12[b]:

<table>
<thead>
<tr>
<th>Ingredient (Category if applicable)</th>
<th>C.A.S. No</th>
<th>Regulation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEPTANE (Heptane)</td>
<td>142-82-5</td>
<td>Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals</td>
<td>Applicable</td>
</tr>
<tr>
<td>HEPTANE</td>
<td>142-82-5</td>
<td>Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals</td>
<td>Applicable</td>
</tr>
</tbody>
</table>

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification
Health: 1  Flammability: 3  Reactivity: 0  Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.
Revision Changes:
Copyright was modified.
Section 3: Potential effects from inhalation information was modified.
Section 3: Potential effects from ingestion information was modified.
Section 14: Transportation legal text was modified.
Section 9: Boiling point information was modified.
Section 5: Flammable limits (UE) information was modified.
Section 5: Flammable limits (LEL) information was modified.
Section 9: Flammable limits (LEL) information was modified.
Section 9: Flammable limits (UEL) information was modified.
Section 2: Ingredient table was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 15: TSCA section 12[b] information was modified.
Section 6: Methods for cleaning up information was modified.
Section 3: Immediate other hazard(s) was added.
Section 6: 6.2. Environmental precautions heading was added.
Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was added.
Section 6: Clean-up methods heading was added.
Section 6: Release measures heading was deleted.

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3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M.

3M MSDSs are available at www.3M.com
1. Identification

Product Name: Dispersalloy®

Substance Identity: Dispersalloy® Dispersed Phase Alloy (Capsules)

Date of Last Revision: 05/9/13

Manufacturer: DENTSPLY Caulk

Address: 38 West Clarke Avenue
Middletown DE 19963-1805


Grades or Minor Variant Identities: Fast Set and Regular Set 1, 2, or 3 Spill

Product Use (for Canada): Dental Amalgam Filling Material

Emergency Telephone Number: (302) 422-4511 (8:00 AM ± 4:30 PM Eastern Time)

2. Hazard(s) Identification

Warning

May be harmful if swallowed.

Call a Poison Center or Physician if you feel unwell.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>EC Number</th>
<th>C.A.S. Number</th>
<th>Exposure Limits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver</td>
<td>231-131-3</td>
<td>7440-22-4</td>
<td>0.1 mg/M³</td>
<td>70</td>
</tr>
<tr>
<td>Tin</td>
<td>231-141-8</td>
<td>7440-31-5</td>
<td>2 mg/M³</td>
<td>18</td>
</tr>
<tr>
<td>Copper</td>
<td>231-159-6</td>
<td>7440-50-8</td>
<td>1 mg/M³</td>
<td>12</td>
</tr>
</tbody>
</table>

4. First Aid Measures

<table>
<thead>
<tr>
<th>Routes of Exposure</th>
<th>First Aid Instructions</th>
<th>Immediate Medical Attention</th>
<th>Delayed Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Immediately flush eyes with copious amounts of water for 15 minutes. Seek medical attention if irritation or discomfort persists.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin</td>
<td>Wash thoroughly with soap and water.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Gently blow nose and irrigate with clean water. Consult physician if irritation persists.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Ingestion</td>
<td>If swallowed consult physician.</td>
<td>Not Applicable</td>
<td>Ingestion of alloy may cause GI tract irritation, nausea or diarrhea. TOXICITY: LD₅₀ &gt;5000mg/kg. Low order of toxicity is expected if material is ingested.</td>
</tr>
<tr>
<td>Other:</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Note to Physicians (Treating, Testing and Monitoring): Treat symptomatically.

5. Fire and Explosion Data

Flashpoint Method: Not Applicable

Flammable (Explosive) Limits in Air: LEL: Not Applicable  UEL: Not Applicable

Autoignition Temperature: Not Applicable. Product will not autoignite.

Flame Propagation or Burning Rate (for Solids): Not Applicable

Properties Contributing to Fire Intensity: Not Applicable

Flammability Classification: Not Applicable

Extinguishing Media: Use dry powder extinguishing media.

Extinguishing Media to Avoid: Water with full jet.

Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices.

Unusual Fire and Explosion Hazards: Large quantities of metal powder in air may cause a fire or explosion hazard due to dusting. Molten metal can ignite combustibles in common with most powdered materials; this product should be treated as a combustible dust in the finely divided and suspended state. No dangerous decomposition products known. In large quantities product may present an explosion hazard due to dusting.

6. Accidental Release Measures

Containment Techniques: Material is a grey metallic dry powder. Store only in the original package. The avoidance of any air contaminant is always a recommended practice. Adherence to work place ventilation standards is an assurance of general personnel health and comfort.

Spill/Leak Clean-up Procedures and Equipment: Wear protective clothing and scoop up bulk material and place in a labeled plastic or metal container. Avoid gross skin contact to minimize the possibility of drying out the skin. Ensure adequate ventilation, by either natural or mechanical means to keep dust level below PEL.

Evacuation Procedures: Not Applicable

Special Instructions: Not Applicable

Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Product is intended for dental use only. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.
8. Exposure Control / Personal Protection

Ventilation: Ensure adequate ventilation, by either natural or mechanical means to keep exposure levels below PEL.

<table>
<thead>
<tr>
<th>Routes of Entry</th>
<th>Personal Protective Equipment (PPE) for Normal Use</th>
<th>Other Engineering Controls: Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/Face</td>
<td>Personal Protective Equipment (PPE) for Emergencies</td>
<td>PPE for Emergencies</td>
</tr>
<tr>
<td>Skin</td>
<td>Safety Glasses</td>
<td></td>
</tr>
<tr>
<td>Inhalation</td>
<td>Use sufficient natural or mechanical ventilation to keep vapor exposure level below PEL.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Body Protection</td>
<td>Protective work clothing such as lab coat to prevent skin exposure.</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin. Do not eat, drink or smoke when using.

Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable

Other Protective Measures and Equipment: Not Applicable

9. Physical and Chemical Characteristics

Appearance: Grey colored, dry metallic powder or may be formed into pellets.

Normal Physical State: Metallic powder or may be formed into pellets.

Specific Gravity: 9.6 g/cm³

Melting Point: Approximately 970°C (1778°F)

Solubility in Water: Not soluble

Phosphate: Not Applicable

Vapor Pressure (mm Hg): Not Applicable

Vapor Density (AIR=1): Not Applicable

Evaporation Rate (Butyl Acetate =1): Not Applicable

Other: Not Applicable

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Strong mineral acids, hydrogen peroxide, acetylene, and ethylenimine.

Hazardous Products Produced During Decomposition: None.

Hazardous Polymerization: May Occur

Conditions to Avoid: None known

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data: Product not considered hazardous. TOXICITY: LD₅₀ >5000mg/kg.

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Product not considered hazardous.

13. Disposal Considerations

Regulations: The product or individual components may be salvaged or reclaimed for reuse. Dispose of material as solid waste in a closed container. Dispose of in accordance with Federal, State and Local regulations. Pick up powder by carefully sweeping, vacuuming or wet mopping spilled material into an acceptable closed waste container. Avoid generating airborne dust.

Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.

14. Transport Information

Regulated for Shipping: No

DOT Shipping Name: Not Regulated

Packing Group: Not Applicable

DOT Hazard Class: Not Applicable

UN Number: Not Applicable

DOT Labels Required (49CFR172.101): Not Applicable

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.

U.S. Federal Regulations: CERCLA 103 Reportable Quantity: None.

EPCRA Section 313 Toxic Chemicals: This product contains the following chemical(s) subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): None.

EPCRA Section 302 Extremely Hazardous Substances EHS (TLO): None

EPA Toxic Substances Control Act (TSCA) Status: All of the components are listed on the TSCA inventory.

U.S. State Regulations California Proposition 65: None

Canadian Environmental Protection Act: This product is a medical device and not subject to chemical notification requirements.

European Community Labeling: Not Applicable.

European Inventory of New and Existing Chemicals Substances (EINECS): This product is a medical device and not subject to chemical notification requirements.

Other: Not Applicable
<table>
<thead>
<tr>
<th>16. Other Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex. All components are synthetically produced; none are derived from animal products. This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific products features and shall not establish a legally valid contractual relationship. The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.</td>
</tr>
</tbody>
</table>
1. Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>SDS Code Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>560898</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance Identity</th>
<th>Date of Last Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>01/14/13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacturer:</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENTSPLY Caulk</td>
<td>38 West Clarke Avenue</td>
</tr>
</tbody>
</table>
<pre><code>      | Milford DE 19963-1805 |
</code></pre>
<p>|                   | <a href="http://www.caulk.com">http://www.caulk.com</a>  |
| <a href="http://www.dentsply.com">http://www.dentsply.com</a> |</p>

<table>
<thead>
<tr>
<th>Grades or Minor Variant Identities</th>
<th>Information Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>(302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Use (for Canada)</th>
<th>Emergency Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>(302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)</td>
</tr>
</tbody>
</table>

2. Hazard(s) Identification

- **Mercury** is a chemical known to the State of California to cause birth defects or other reproductive harm.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS Number</th>
<th>Exposure Limits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury</td>
<td>7439-97-6</td>
<td>0.025mg/M³</td>
<td>100</td>
</tr>
</tbody>
</table>

4. First Aid Measures

<table>
<thead>
<tr>
<th>Routes of Exposure</th>
<th>First Aid Instructions</th>
<th>Immediate Medical Attention</th>
<th>Delayed Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Get medical aid immediately. Do NOT let victim rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).</td>
<td>Do NOT let victim rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin</td>
<td>Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.</td>
<td>Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Get medical aid immediately. Remove from exposure and move to fresh air immediately.</td>
<td>Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth to mouth resuscitation.</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
### 5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Flashpoint Method: Not Applicable</th>
<th>Flammable Explosive Limits in Air LEL: Not Applicable UEL: Not Applicable</th>
<th>Autoignition Temperature: Not Applicable</th>
<th>Product Will Not Autoignite. Other: Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flame Propagation or Burning Rate (for Solids): Not Applicable</td>
<td>Properties Contributing to Fire Intensity: Not Applicable</td>
<td>Flammability Classification: Not Applicable</td>
<td>Extinguishing Media: Water spray, carbon dioxide, foam, or dry chemical. Extinguishing Media to Avoid: Water with full jet.</td>
</tr>
<tr>
<td>Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices. Mercury vapors and mercury oxides generated during fires involving this material are toxic; additionally, this element can be irritating to contaminated tissue. Therefore, this material represents a severe health hazard to firefighters. Mercury is not flammable, and is relatively stable (though it can react with many metals to form amalgams). Water can cause environmental damage. Dike and collect water used to fight fire. During a fire, thermal decomposition or combustion may generate irritating and toxic gases.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unusual Fire and Explosion Hazards: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move fire-exposed containers if it can be done without risk to firefighters. Apply cooling water to sides of containers that are exposed to flame until well after fire is out. Decontaminate all equipment thoroughly after the conclusion of fire-fighters activities. If possible, if prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 6. Accidental Release Measures

| Containment Techniques: For small spills, absorb spill with inert material, such as: sand, vermiculite, earth or other absorbent material and place into suitable container. Do not touch spilled material. Avoid runoff into storm sewers and ditches, which lead to waterways. Keep unnecessary people away. Isolate hazard area. Use Protective equipment as in section 8. |
| Spill/Leak Clean-up Procedures and Equipment: Clean up spill immediately, using protective equipment as in section 8. Do not touch spilled material. Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into container for disposal. Keep unnecessary people away. Isolate hazard area. Provide ventilation. |
| Evacuation Procedures: Not Applicable | Special Instructions: Not Applicable | Reporting Requirements: Not Applicable |

### 7. Handling and Storage

Handling Practices and Warnings: Always keep mercury stored in a sealed container away from heat. Store away from food and beverages. Product is intended for dental use only. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals.

Storage Practices and Warnings: Store in the original package. Keep package tightly sealed. Store in a cool dry area. Store away from food and beverages. Minimize dust generation and accumulation. Avoid breathing dust and contact with eyes. Observe normal warehouse handling procedures. The avoidance of any air contaminant is always a recommended practice.

### 8. Exposure Control / Personal Protection

| Ventilation: Ensure adequate ventilation, by either natural or mechanical means to keep exposure levels below PEL. |
| Other Engineering Controls: Not Applicable |
| Routes of Entry: Personal Protective Equipment (PPE) for Normal Use |
| PPE for Emergencies |
| Eye/Face: Safety Glasses |
| Not Applicable |
| Skin: The glove material to be impermeable, resistant to the product and prevent skin exposure. Neoprene gloves are acceptable for routine use. |
| Not Applicable |
| Inhalation: Use sufficient natural or mechanical ventilation to keep vapor exposure level below PEL. |
| Not Applicable |
| Body Protection: Protective work clothing such as lab coat to prevent skin exposure. |
| Not Applicable |

| General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin. Do not eat, drink or smoke when using. |

| Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable |
| Other Protective Measures and Equipment: Not Applicable |

### 9. Physical and Chemical Characteristics

| Appearance: Silver liquid. |
| Odor: None |
| Normal Physical State: Metallic liquid. |
| Melting Point: -39°C (-38°F) |
10. Stability and Reactivity Data


Hazardous Products Produced During Decomposition: Mercury vapors and mercury oxides generated during fires involving this material are toxic; additionally, this element can be irritating to contaminated tissue. Therefore, this material represents a severe health hazard to firefighters. Mercury is not flammable, and is relatively stable (though it can react with many metals to form amalgams).

Hazardous Polymerization: May Occur

Conditions to Avoid: Excessive heat. Material will readily vaporize.

Stability: Stable

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data:

Carcinogenicity: NTP?: Not listed IARC monographs?: No OSHA regulated?: No.

Epidemiology: Intraperitoneal, rat: TDL0=400mg/Kg/14D-1 (Tumorigenic-equivocal tumorigenic agent by RTECS criteria – tumors at site of application).

Teratogenicity: Inhalation, rat: TCL0 = 1mg/M3/24Hr (female 1-20days after conception) Effects on Embryo or Fetus – fetotoxicity (except death, e.g. stunted fetus).

Reproductive Effects: Inhalation, rat: TCL0 = 490 ng/M3/24 Hr (male 16 pre-mating) Paternal Effects – spermatogenesis (including genetic material, sperm morphology, motility, and count).

Mutagenicity: Cytogenetic Analysis: Unreported, man = 150 P g/M3.

Neurotoxicity: The brain is the critical organ in humans for chronic vapor exposure; in severe cases, spontaneous degeneration of the brain cortex can occur as a late sequela to past exposure.

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Mercury is Toxic and Dangerous to the Environment. Do not allow Mercury to be released into streams or waterways.

EcoToxicity: Fish: Rainbow Trout LC50 = 0.16-0.90 mg/L; 96 Hr; Unspecified Fish: Channel catfish: LC50 = 0.35 mg/L; 96 Hr; Unspecified Water Flea Daphnia: EC50 = 0.01 mg/L; 48 Hr; Unspecified. In aquatic systems, mercury appears to bind to dissolved matter or fine particulates, while the transport of mercury bound to dust particles in the atmosphere or bed sediments in rivers and lakes is generally less substantial. The conversion, in aquatic environments, of inorganic elemental mercury to methyl mercury implies that recycling of mercury from sediment to water to air and back could be a rapid process.

Environmental: Mercury bioaccumulates and concentrates in food chain (concentration may be as much as 10,000 times that of water). Bioconcentration factors of 63,000 for freshwater fish and 10,000 for saltwater fish have been found. Much of the mercury deposited on land appears to re-evaporize within a day or two, at least in areas substantially heated by sunlight.

Physical: All forms of mercury (metal, vapor, inorganic, or organic) are converted to methyl mercury. Inorganic forms are converted by microbial action in the atmosphere to methyl mercury.

13. Disposal Considerations

Regulations: Do not incinerate or place in landfills, return to reclamation centers. Mercury may be salvaged or reclaimed for reuse. Dispose of in accordance with Federal, State and Local regulations.

RCRA P – Series Hazardous Waste Code: None Listed

RCRA U-Series Hazardous Waste Code for Mercury: U151
14. Transport Information

<table>
<thead>
<tr>
<th>Properties (Physical/Chemical) Affecting Disposal: Regulated for Shipping: Yes</th>
<th>DOT Shipping Name: Mercury contained in manufactured articles</th>
<th>Packing Group: III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do Changes in Quantities, packaging, or shipment method change product classification?</td>
<td>DOT Hazard Class: 8</td>
<td>UN Number: 3506</td>
</tr>
<tr>
<td>Yes, Over 1 pound RQ – Reportable Quantity</td>
<td>DOT Labels Required (49CFR172.101): Yes, Over 1 pound RQ – Reportable Quantity, Corrosive Label</td>
<td>Other: Not Applicable</td>
</tr>
<tr>
<td>IATA Shipping Name: Mercury contained in manufactured articles</td>
<td>IATA Hazard Class: 8 Sub Risk 6.1</td>
<td>UN Number: 3506</td>
</tr>
<tr>
<td>IMDG Shipping Name: Mercury contained in manufactured articles</td>
<td>IMDG Hazard Class: 8</td>
<td>UN Number: 3506</td>
</tr>
<tr>
<td>IMDG Hazard Labels Required: Yes, Over 1 pound RQ – Reportable Quantity, Corrosive Label</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. Regulatory Information

This product has been classified in accordance with the hazard criteria of the Globally Harmonized System of Classification and Labeling of Chemicals and the SDS contains all of the information required by the Canadian Controlled Products Regulations.

- **U.S. Federal Regulations:** CERCLA 103 Reportable Quantity: RQ is 1 pound for Mercury. Report spills required under federal, state and local regulations.
- **EPCRA Section 313 Toxic Chemicals:** This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): Mercury. The Reportable Quantity RO is 1 pound for Mercury.
- **EPCRA Section 302 Extremely Hazardous Substances EHS (TPQ):** None.
- **Clean Air Act section 112r:** Mercury is considered as a hazardous air pollutant. (HAP).
- **Clean Water Act:** Mercury is not listed as a Hazardous Substance under the CWA. Mercury is listed as a Priority Pollutant under the CWA. Mercury is listed as a Toxic Pollutant under the CWA.
- **OSHA:** OSHA does not consider Mercury highly hazardous.
- **RCRA U-Series Hazardous Waste Code:** None Listed.
- **EPA Toxic Substances Control Act (TSCA) Status:** Mercury (CAS# 7439-97-6) is listed on the TSCA inventory.
- **State Regulations:** Mercury is on the following states Right to Know lists: California, New Jersey, Pennsylvania, Minnesota, and Massachusetts.
- **U.S. State Regulations California Proposition 65:** This product contains mercury, a chemical known to the State of California to cause birth defects or other reproductive harm.
- **Canada – DSL/NDSL:** Mercury is listed on Canada’s DSL List.
- **Canada – WHMIS:** Mercury has a WHMIS classification of D2A, E. This chemical has been classified in accordance with the hazard criteria of the Controlled Products Regulations and this MSDS contains all of the information required by those regulations.
- **Canada Ingredient Disclosure List:** Mercury is listed on the Canadian Ingredient Disclosure List.
- **Canadian Environmental Protection Act:** This product is a medical device and not subject to chemical notification requirements.
- **European Community Labeling:** EC# 231-106-7 for Mercury. Mercury is Toxic and Dangerous for the Environment. R23 Toxic by Inhalation, R33 Danger of Cumulative Effects, R50/R53 Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment. S1/2 Keep locked up and out of reach of children, S7 Keep container tightly closed, S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible), S60 This material and its container must be disposed of as hazardous waste, S61 Avoid release to the environment. Refer to special instructions on the MSDS. European Inventory of New and Existing Chemicals Substances (EINECS): EC# 231-106-7 for Mercury.
- **Other:** Not Applicable

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex.

All components are synthetically produced; none are derived from animal products.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific products features and shall not establish a legally valid contractual relationship.

The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DFU.

~Verified on 2014-04 by Henry Schein to be the most current version of the SDS. To be verified again on 2017-04.~
SAFETY DATA SHEET

1. Identification of the substance or mixture and of the supplier

1.1 Product Name:
Dura-Green Stones (points & wheels)/ CARBORUNDUM POINT & WHEELS

1.2 Company/Undertaking identification
Manufacturer's Name: SHOFU INC.
Address: 11 Kamitakamatsu-cho, Fukuine, Higashiyama-ku, Kyoto 605-0883, JAPAN
Phone: +81-75-561-1112
Fax: +81-75-561-2273
Section in Charge: Quality Assurance Section
Date Prepared: 2014.9.29

1.3 Emergency Telephone Number
+81-75-561-1112

2. Hazardous identification

GHS CLASSIFICATION
It is not possible to classify it.

LABEL ELEMENTS
SYMBOL —
SIGNAL WORD —
HAZARD STATEMENTS —

PRECAUTIONARY STATEMENTS
[Prevention]
Do not handle until all safety precautions have been read and understood.

[Response]
If you feel unwell, get medical advice/attention.

[Storage]
Store in a dry place. Take measures to avoid mechanical and chemical damage.

[Disposal]
Dispose of contents and container in accordance with regulation.

3. Composition/information on ingredients

Working part:
- Silicone carbide grit (SiC)
- Bonding glass phase
- Others

Shank part:
- Stainless steel shank

No hazardous material is present in this grinding stone.

4. First-aid measures

4.1 Eye contact: Wash immediately plenty of water and seek medical advice, since the grinding dust cause scratched harm to the cornea if contact.

4.2 Skin contact: N/A

4.3 Ingestion: N/A

4.4 Inhalation: Remove from exposure (if inhaled the dust from grinding)
5. Fire-fighting measures

This product is non-flammable.
5.1 Suitable Extinguishing Media: N/A
5.2 Extinguishing Media Should not be used: N/A
5.3 Special Exposure Hazards Arising: N/A
5.4 Special Protective Equipment: N/A

6. Accidental release measures

6.1 Personal Precautions: N/A
6.2 Methods for Cleaning Up: Pick up and collect in a suitable container.

7. Handling and storage

7.1 Handling: Use in accordance with instruction Regarding rotating speed.
7.2 Storage: Store in a dry place. Take measures to avoid mechanical and chemical damage.

8. Exposure controls/personal protection

8.1 Exposure limits: Chemical name CAS No. ACGIH TLV
N/A
8.2 Respiratory Protection: Dust respirator and/or local exhaust.
8.3 Hand Protection: N/A
8.4 Eye Protection: Safety goggles
8.5 Skin Protection: General protective clothing

9. Physical and chemical properties

9.1 Appearance/Odor: Dark green grinding odorless Grinding stones (abrasives)
9.2 Boiling Point/Boiling Range: N/D
9.3 Melting Point/Melting Range: N/D
9.4 Flash point: N/D
9.5 Auto flammability: N/D
9.6 Explosive Properties: N/D
9.7 Oxidizing Properties: N/D
9.8 Vapour Pressure: N/D
9.9 Relative Density: N/D
9.10 Solubility: water solubility Non-soluble

10. Stability and reactivity

Stable in a normal temperature.
10.1 Condition to Avoid: N/A
10.2 Materials to Avoid: N/A
10.3 Hazardous Decomposition Products:
Will not occur

11. Toxicological information

No information

12. Ecological information

No information
13. Disposal considerations
   Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).

14. Transport information
   Airline restriction information: It doesn't correspond.
   UN No.: It doesn't correspond.
   Sea restriction information: It doesn't correspond.
   UN No.: It doesn't correspond.

15. Regulatory information
   Follow all regulations in your country.

16. Other information
   This product is intended for use by dental professionals. (instrument/material)
1. Identification of the substance or mixture and of the supplier

1.1 Product Name:
Dura-White Stones /WHITE POINTS /Lab Series Stones “white” (points & wheels)
/Ceramo-Metal (points & wheels)

1.2 Company /Undertaking identification
Manufacturer’s Name: SHOFU INC.
Address: 11 Kamitakamatsu-cho, Fukuine, Higashi-ku, Kyoto 605-0983, JAPAN
Phone: +81-75-561-1112
Fax: +81-75-561-2273
Section in Charge: Quality Assurance Section
Date Prepared: 2014.9.22

1.3 Emergency Telephone Number
+81-75-561-1112

2. Hazardous identification

GHS CLASSIFICATION

It is not possible to classify it.

LABEL ELEMENTS

SYMBOL

SIGNAL WORD

HAZARD STATEMENTS

PRECAUTIONARY STATEMENTS

[Prevention]
Do not handle until all safety precautions have been read and understood.

[Response]
If you feel un-well, get medical advice/attention.

[Storage]
Store in a dry place. Take measures to avoid mechanical and chemical damage.

[Disposal]
Dispose of contents and container in accordance with regulation.

3. Composition/information on ingredients

Working part: Alumina grit (Al₂O₃)

Others

Shank part: Stainless steel shank

No hazardous material is present in this grinding stone.

4. First-aid measures

4.1 Eye contact: Wash immediately plenty of water and seek medical advice, since the grinding dust cause scratched harm to the cornea if contact.

4.2 Skin contact: N/A

4.3 Ingestion: N/A

4.4 Inhalation: Remove from exposure (if inhaled the dust from grinding)
5. Fire-fighting measures

This product is non-flammable.

5.1 Suitable Extinguishing Media: N/A
5.2 Extinguishing Media Should not be used: N/A
5.3 Special Exposure Hazards Arising: N/A
5.4 Special Protective Equipment: N/A

6. Accidental release measures

6.1 Personal Precautions: N/A
6.2 Methods for Cleaning Up: Pick up and collect in a suitable container.

7. Handling and storage

7.1 Handling: Use in accordance with instruction Regarding rotating speed.
7.2 Storage: Store in a dry place. Take measures to avoid mechanical and chemical damage.

8. Exposure controls/personal protection

8.1 Exposure limits: Chemical name CAS No. ACGIH TLV
N/A

8.2 Respiratory Protection: Dust respirator and/or local exhaust.
8.3 Hand Protection: N/A
8.4 Eye Protection: Safety goggles
8.5 Skin Protection: General protective clothing

9. Physical and chemical properties

9.1 Appearance/Odor: White odorless Grinding stone(abrasive)
9.2 Boiling Point/Boiling Range: N/D
9.3 Melting Point/Melting Range: N/D
9.4 Flash point: N/D
9.5 Auto flammability: N/D
9.6 Explosive Properties: N/D
9.7 Oxidizing Properties: N/D
9.8 Vapour Pressure: N/D
9.9 Relative Density: N/D
9.10 Solubility: water solubility Non-soluble

10. Stability and reactivity

Stable in a normal temperature.

10.1 Condition to Avoid: N/A
10.2 Materials to Avoid: N/A
10.3 Hazardous Decomposition Products: Will not occur

11. Toxicological information

No information

12. Ecological information

No information
13. Disposal considerations

Dispose of contents/container to in accordance with local/regional/national/international regulations (to be specified).

14. Transport information

Airline restriction information: It doesn’t correspond.
UN No.: It doesn’t correspond.
Sea restriction information: It doesn’t correspond.
UN No.: It doesn’t correspond.

15. Regulatory information

Follow all regulations in your country.

16. Other information

This product is intended for use by dental professionals. (instrument/material)
1 Identification

· Product identifier
· Trade name: COE-SOFT (Liquid)

· Relevant identified uses of the substance or mixture and uses advised against
  Dental material
  The product is intended for professional use.
  To avoid risks for humans and environment obtain instructions.

· Application of the substance / the mixture
  Manufacture of dental prosthesis

· Details of the supplier of the safety data sheet
  · Manufacturer/Supplier:
    GC America Inc.
    3737 W. 127th Street
    Alsip, IL 60803
    USA
    sds@gcamerica.com
  · Information department: Regulatory Affairs
  · Emergency telephone number:
    During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
    Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

· Classification of the substance or mixture
  Flam. Liq. 2   H225  Highly flammable liquid and vapor.
  STOT RE 1  H372  Causes damage to organs through prolonged or repeated exposure.
  Aquatic Chronic 2  H411  Toxic to aquatic life with long lasting effects.
  Skin Irrit. 2   H315  Causes skin irritation.
  Skin Sens. 1   H317  May cause an allergic skin reaction.
  Eye Irrit. 2B  H320  Causes eye irritation.

· Additional information:
  The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

· Label elements
  · GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms

· Signal word Danger

(Contd. on page 2)
Trade name: COE-SOFT (Liquid)

- Hazard-determining components of labeling:
  - benzyl salicylate
  - ethyl alcohol
  - peppermint oil

- Hazard statements
  - Highly flammable liquid and vapor.
  - Causes skin and eye irritation.
  - May cause an allergic skin reaction.
  - Causes damage to organs through prolonged or repeated exposure.
  - Toxic to aquatic life with long lasting effects.

- Precautionary statements
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Do not breathe dust/fume/gas/mist/vapors/spray.
  - Wear protective gloves / eye protection / face protection.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Store in a well-ventilated place. Keep cool.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 1
    - Fire = 3
    - Reactivity = 1

  - HMIS-ratings (scale 0 - 4)
    - HEALTH 1 Health = 1
    - FIRE 3 Fire = 3
    - REACTIVITY 1 Reactivity = 1

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

### 3 Composition/information on ingredients

- Chemical characterization: Mixtures
  - Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
  - 118-58-1 benzyl salicylate 25-50%
  - 64-17-5 ethyl alcohol 10-20%
  - 8006-90-4 peppermint oil 1-5%

- Additional information:
  - If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA’s Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).
4 First-aid measures

· Description of first aid measures
  · General information:
    Immediately remove any clothing soiled by the product.
    If symptoms persist consult doctor.
  · After inhalation:
    Supply fresh air; consult doctor in case of complaints.
    In case of unconsciousness place patient stably in side position for transportation.
  · After skin contact:
    Immediately wash with water and soap and rinse thoroughly.
    Seek medical treatment.
  · After eye contact:
    Protect unharmed eye.
    Rinse opened eye for several minutes under running water. Then consult a doctor.
  · After swallowing:
    Rinse out mouth and then drink plenty of water.
    If symptoms persist consult doctor.
  · Information for doctor:
    · Most important symptoms and effects, both acute and delayed Allergic reactions
    · Indication of any immediate medical attention and special treatment needed
    No further relevant information available.

5 Fire-fighting measures

· Extinguishing media
  · Suitable extinguishing agents: CO2, sand, extinguishing powder. Do not use water.
  · For safety reasons unsuitable extinguishing agents: Water
  · Special hazards arising from the substance or mixture
    Formation of toxic gases is possible during heating or in case of fire.
  · Advice for firefighters
  · Protective equipment: Wear self-contained respiratory protective device.
  · Additional information
    Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Remove persons from danger area.
  Keep away from ignition sources.
  Avoid contact with the eyes and skin.
  Wear protective clothing.
  Environmental precautions:
    Do not allow product to reach sewage system or any water course.
    Inform respective authorities in case of seepage into water course or sewage system.
    Do not allow to penetrate the ground/soil.
    In case of seepage into the ground inform responsible authorities.
  · Methods and material for containment and cleaning up:
    Ensure adequate ventilation.
    Absorb liquid components with liquid-binding material.
    Dispose of the collected material according to regulations.
Trade name: COE-SOFT (Liquid)

- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
- Precautions for safe handling
  Observe instructions for use.
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.
  Avoid contact with the eyes and skin.
- Information about protection against explosions and fires:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
  Do not spray on a naked flame or any incandescent material.

- Storage:
- Requirements to be met by storerooms and receptacles:
  Store in a cool location.
  Store only in unopened original receptacles.
- Information about storage in one common storage facility: Store away from foodstuffs.
- Further information about storage conditions:
  Observe instructions for use / storage.
  Keep receptacle tightly sealed.
  Store in cool, dry conditions in well sealed receptacles.
  Protect from heat and direct sunlight.
  Store in a cool place.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
  - Components with limit values that require monitoring at the workplace:
    64-17-5 ethyl alcohol
    PEL Long-term value: 1900 mg/m³, 1000 ppm
    REL Long-term value: 1900 mg/m³, 1000 ppm
    TLV Short-term value: 1880 mg/m³, 1000 ppm
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
  - Personal protective equipment:
    General protective and hygienic measures:
    The usual precautionary measures for handling chemicals should be followed.
    Avoid contact with the eyes and skin.
    Wash hands before breaks and at the end of work.
    Immediately remove all soiled and contaminated clothing.
    Breathing equipment: Suitable respiratory protective device recommended.
Trade name: COE-SOFT (Liquid)

- **Protection of hands:** Protective gloves
- **Material of gloves**
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:**
    - Form: Liquid
    - Color: Clear
  - **Odor:** Characteristic
  - **Odor threshold:** Not determined.
  - **pH-value:** Not determined.
- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** 173 °C (343 °F)
- **Flash point:** 16 °C (61 °F)
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Undetermined.
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**
  - Lower: 3.5 Vol %
  - Upper: 15.0 Vol %
- **Vapor pressure:** Not determined.
- **Density at 20 °C (68 °F):** 1.04 g/cm³ (8.679 lbs/gal)
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.
- **Solubility in / Miscibility with Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
Trade name: COE-SOFT (Liquid)

- Viscosity:
  - Dynamic at 20 °C (68 °F): 34 mPas
  - Kinematic: Not determined.

- Solvent content:
  - Organic solvents: 14.8%
  - VOC content: 14.8%

- Other information
  No further relevant information available.

10 Stability and reactivity

- Reactivity
  No further relevant information available.

- Chemical stability
  Stable at ambient temperature.

- Thermal decomposition / conditions to be avoided:
  No decomposition if used according to specifications.

- Possibility of hazardous reactions
  No dangerous reactions known.

- Conditions to avoid
  No further relevant information available.

- Incompatible materials
  No further relevant information available.

- Hazardous decomposition products
  No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects

- Acute toxicity:

- LD/LC50 values that are relevant for classification
  No further relevant information available.

- Primary irritant effect:
  - on the skin: Irritant to skin and mucous membranes.
  - on the eye: Irritating effect.

- Sensitization
  Sensitization possible through skin contact.

- Experience with humans:
  May cause damage to central nervous system.
  May cause damage to liver.
  May cause damage to lungs.

- Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Irritant

- Carcinogenic categories

  - IARC (International Agency for Research on Cancer)
    
    | Ingredient     | Category |
    |----------------|----------|
    | ethyl alcohol  | IARC 1   |
    | isopropyl alcohol | IARC 3 |

  - NTP (National Toxicology Program)
    None of the ingredients is listed.

  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

- Carcinogenic categories' legend:
  IARC Group 1: The agent is carcinogenic to humans.
  IARC Group 2A: The agent is probably carcinogenic to humans.
12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Ecotoxicological effects:
  - Remark: Toxic for fish
- Additional ecological information:
  - General notes:
    - Water hazard class 2 (Self-assessment): hazardous for water
    - Do not allow product to reach ground water, water course or sewage system.
    - Danger to drinking water if even small quantities leak into the ground.
    - Also poisonous for fish and plankton in water bodies.
    - Toxic for aquatic organisms
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
- DOT, ADR, IMDG, IATA: UN1170
Trade name: COE-SOFT (Liquid) (Contd. of page 7)

<table>
<thead>
<tr>
<th>· UN proper shipping name</th>
<th>· DOT</th>
<th>Ethanol solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>· ADR</td>
<td></td>
<td>1170 Ethanol solutions (Ethyl alcohol solutions)</td>
</tr>
<tr>
<td>· IMDG, IATA</td>
<td></td>
<td>ETHANOL SOLUTION</td>
</tr>
</tbody>
</table>

| · Transport hazard class(es) |
|                            |
| · DOT                      |
|                            |
| · Class                    | 3 Flammable liquids |
| · Label                    | 3 |

| · ADR                      |
|                            |
| · Class                    | 3 (F1) Flammable liquids |
| · Label                    | 3 |

| · IMDG, IATA               |
|                            |
| · Class                    | 3 Flammable liquids |
| · Label                    | 3 |

| · Packing group |
| · DOT, ADR, IMDG, IATA  | II |

| · Environmental hazards: |
| · Marine pollutant:     | No |

| · Special precautions for user |
| · Danger code (Kemler):      | 33 |
| · EMS Number:                | F-E,S-D |

| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code |
| · Not applicable. |

| · Transport/Additional information: |
| · ADR                                 |
| · Excepted quantities (EQ)           | Code: E2 |
| · Maximum net quantity per inner packaging: 30 ml |
| · Maximum net quantity per outer packaging: 500 ml |

| · IMDG                                |
| · Limited quantities (LQ)             | 1L |

(Contd. on page 9)
Trade name: COE-SOFT (Liquid)

- **Excepted quantities (EQ)**
  - Code: E2
    - Maximum net quantity per inner packaging: 30 ml
    - Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation"**
  - UN1170, Ethanol solutions (Ethyl alcohol solutions), 3, II

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **SARA (Superfund Amendments and Reauthorization Act)**
    - **Section 355 (extremely hazardous substances):** None of the ingredient is listed.
    - **Section 313 (Specific toxic chemical listings):**
      - isopropyl alcohol
  - **TSCA (Toxic Substances Control Act):**
    - All ingredients are listed.

- **Carcinogenic categories**
  - None of the ingredients is listed.

- **EPA (Environmental Protection Agency)**
  - None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**
  - ethyl alcohol A3
  - isopropyl alcohol A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  - None of the ingredients is listed.

- **GHS label elements**
  - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS02
    - GHS07
    - GHS08
    - GHS09

- **Signal word**
  - Danger

- **Hazard-determining components of labeling:**
  - benzyl salicylate
  - ethyl alcohol
  - peppermint oil

- **Hazard statements**
  - Highly flammable liquid and vapor.
  - Causes skin and eye irritation.
  - May cause an allergic skin reaction.
  - Causes damage to organs through prolonged or repeated exposure.
  - Toxic to aquatic life with long lasting effects.

- **Precautionary statements**
  - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  - Do not breathe dust/fume/gas/mist/vapors/spray.
40.1.1 Wear protective gloves / eye protection / face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy
to do. Continue rinsing. Store in a well-ventilated place. Keep cool.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

· Department issuing MSDS: Regulatory Affairs
· Contact:
  Regulatory Affairs
  Telephone No. +1 (708) 597-0900
  sds@gcamerica.com
· Date of preparation / last revision 02/24/2015 / -
· Abbreviations and acronyms:
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  HCS: Hazard Communication Standard (USA)
  MSDS: Material Safety Data Sheet
  SDS: Safety Data Sheet
  ECHA: European Chemicals Agency
  OSHA: Occupational Safety and Health Administration (USA)
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the
  International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  VOC: Volatile Organic Compounds (USA, EU)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Flam. Liq. 2: Flammable liquids, Hazard Category 2
  Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
  Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B
  Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
  STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1
  Aquatic Chronic 2: Hazardous to the aquatic environment - Chronic Hazard, Category 2

· Sources
  • Manufacturers' MSDSs/SDSs
  • OSHA (https://www.osha.gov/dts/chemicalsampling/toc/chmcas.html)
  • TOXNET (http://toxnet.nlm.nih.gov/)
  • ECHA (http://echa.europa.eu/)
  • EnviChem (www.echemportal.org)
· Notes:
  CAS Registry Number is a Registered Trademark of the American Chemical Society.
  CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.
· * Data compared to the previous version altered. This version replaces all previous versions.

· Disclaimer:
The information contained herein is believed to be true and accurate. However, all statements,
recommendations or suggestions are made without any guarantee, representation or warranty, express
or implied, on our part. Therefore, no warranty is made or to be implied that the information set out in
**Trade name:** COE-SOFT (Liquid)

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this document is accurate or complete, and we accordingly exclude all liability in connection with the use of this information or the products referred to herein. All such risks are assumed by the purchaser/user. The information contained herein is also subject to change without notice. For the avoidance of doubt, however, nothing in this document excludes or limits our liability for death or personal injury caused by our negligence or for fraudulent misrepresentation.
1 Identification

- **Product identifier**
  - **Trade name:** COE-SOFT (Powder)

- **Relevant identified uses of the substance or mixture and uses advised against**
  - Dental material
  - The product is intended for professional use.
  - To avoid risks for humans and environment obtain instructions.

- **Application of the substance / the mixture** Manufacture of dental prothesis

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    GC America Inc.
    3737 W. 127th Street
    Alsip, IL 60803
    USA
    sds@gcamerica.com
  - **Information department:** Regulatory Affairs
  - **Emergency telephone number:**
    During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
    Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
  The product is not classified according to the Globally Harmonized System (GHS).

- **Additional information:**
  The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

- **Label elements**
  - **GHS label elements** Void
  - **Hazard pictograms** Void
  - **Signal word** Void
  - **Hazard statements** Void
  - **Classification system:**
    - **NFPA ratings (scale 0 - 4)**
      - Health = 1
      - Fire = 1
      - Reactivity = 0
    - **HMIS-ratings (scale 0 - 4)**
      - Health = 1
      - Fire = 1
      - Reactivity = 0

(Contd. on page 2)
4 First-aid measures

· Description of first aid measures
  · General information:
    No special measures required.
    If symptoms persist consult doctor.
  · After inhalation:
    Supply fresh air; consult doctor in case of complaints.
    In case of unconsciousness place patient stably in side position for transportation.
  · After skin contact:
    Rinse with warm water.
    If symptoms persist consult doctor.
  · After eye contact:
    Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  · After swallowing:
    Rinse out mouth and then drink plenty of water.
    If symptoms persist consult doctor.
  · Information for doctor:
    · Most important symptoms and effects, both acute and delayed
      No further relevant information available.
    · Indication of any immediate medical attention and special treatment needed
      No further relevant information available.

5 Fire-fighting measures

· Extinguishing media
  · Suitable extinguishing agents:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
    Use fire fighting measures that suit the environment.
  · For safety reasons unsuitable extinguishing agents: Water with full jet
  · Special hazards arising from the substance or mixture
    Formation of toxic gases is possible during heating or in case of fire.
  · Advice for firefighters
  · Protective equipment: Wear self-contained respiratory protective device.
6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Remove persons from danger area.

- **Environmental precautions:**
  Do not allow product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to penetrate the ground/soil.
  In case of seepage into the ground inform responsible authorities.

- **Methods and material for containment and cleaning up:**
  Pick up mechanically.
  Dispose of the collected material according to regulations.

- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
    Observe instructions for use.
    Prevent formation of dust.
    Any deposit of dust which cannot be avoided must be regularly removed.
  - **Information about protection against explosions and fires:**
    Dust can combine with air to form an explosive mixture.

- **Storage:**
  - **Requirements to be met by storerooms and receptacles:**
    Store only in unopened original receptacles.
  - **Information about storage in one common storage facility:** Store away from foodstuffs.
  - **Further information about storage conditions:** Observe instructions for use / storage.
  - **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**
  - **Components with limit values that require monitoring at the workplace:**
    The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
    The usual precautionary measures for handling chemicals should be followed.
    Do not inhale dust / smoke / mist.

(Contd. on page 4)
Wash hands before breaks and at the end of work.

- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Protection of hands:** Protective gloves
- **Material of gloves**
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
</tr>
<tr>
<td>Form: Powder</td>
</tr>
<tr>
<td>Color: Pink</td>
</tr>
<tr>
<td>Odor: Characteristic</td>
</tr>
<tr>
<td>Odor threshold: Not determined.</td>
</tr>
<tr>
<td>pH-value: Not applicable.</td>
</tr>
<tr>
<td>Change in condition</td>
</tr>
<tr>
<td>Melting point/Melting range: Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range: Undetermined.</td>
</tr>
<tr>
<td>Flash point: Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous): Not determined.</td>
</tr>
<tr>
<td>Ignition temperature: Undetermined.</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>Auto igniting: Product is not selfigniting.</td>
</tr>
<tr>
<td>Danger of explosion: Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits:</td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td>Vapor pressure: Not applicable.</td>
</tr>
<tr>
<td>Density at 20 °C (68 °F): 0.61 g/cm³ (5.09 lbs/gal)</td>
</tr>
<tr>
<td>Relative density: Not determined.</td>
</tr>
<tr>
<td>Vapour density: Not applicable.</td>
</tr>
<tr>
<td>Evaporation rate: Not applicable.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water: Insoluble.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water): Not determined.</td>
</tr>
</tbody>
</table>
Trade name: COE-SOFT (Powder)

- **Viscosity:**
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.

- **Solvent content:**
  - Organic solvents: 0.0 %

- **Solids content:** 100.0 %

- **Other information**
  - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity**
  - No further relevant information available.

- **Chemical stability**
  - Stable at ambient temperature.

- **Thermal decomposition / conditions to be avoided:**
  - No decomposition if used according to specifications.

- **Possibility of hazardous reactions**
  - No dangerous reactions known.

- **Conditions to avoid**
  - No further relevant information available.

- **Incompatible materials:**
  - No further relevant information available.

- **Hazardous decomposition products:**
  - No dangerous decomposition products known.

### 11 Toxicological information

- **Information on toxicological effects**

  - **Acute toxicity:**
    - LD/LC50 values that are relevant for classification: No further relevant information available.

  - **Primary irritant effect:**
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.

  - **Sensitization:**
    - No sensitizing effects known.

- **Additional toxicological information:**
  - The product is not subject to classification according to internally approved calculation methods for preparations.

- **Carcinogenic categories**

  - **IARC (International Agency for Research on Cancer)**
    - Titanium dioxide 2B

  - **NTP (National Toxicology Program)**
    - None of the ingredients is listed.

  - **OSHA-Ca (Occupational Safety & Health Administration)**
    - None of the ingredients is listed.

- **Carcinogenic categories’ legend:**
  - (Contd. on page 6) USA
12 Ecological information

- **Toxicity**
  - **Aquatic toxicity:** No further relevant information available.
  - **Persistence and degradability** No further relevant information available.
  - **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
  - **Additional ecological information:**
    - **General notes:**
      Water hazard class 3 (Self-assessment): extremely hazardous for water
      Do not allow product to reach ground water, water course or sewage system, even in small quantities.
      Danger to drinking water if even extremely small quantities leak into the ground.
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
    - **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:** Smaller quantities can be disposed of with household waste.

- **Uncleaned packaging:**
  - **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**
  - **DOT, ADR, ADN, IMDG, IATA** Void

- **UN proper shipping name**
  - **DOT, ADR, ADN, IMDG, IATA** Void

- **Transport hazard class(es)**
  - **DOT, ADR, ADN, IMDG, IATA**
    - **Class** Void

- **Packing group**
  - **DOT, ADR, IMDG, IATA** Void
Trade name: COE-SOFT (Powder)

<table>
<thead>
<tr>
<th>40.1.1 Environmental hazards:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine pollutant:</td>
<td>No</td>
</tr>
</tbody>
</table>

| 40.1.2 Special precautions for user | Not applicable. |

| 40.1.3 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |

| 40.1.4 UN "Model Regulation": | - |

**15 Regulatory information**

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Section 355 (extremely hazardous substances): | None of the ingredient is listed. |

| Section 313 (Specific toxic chemical listings): | None of the ingredients is listed. |

| TSCA (Toxic Substances Control Act): | All ingredients are listed. |

<table>
<thead>
<tr>
<th>Carcinogenic categories</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA (Environmental Protection Agency)</td>
<td>None of the ingredients is listed.</td>
</tr>
</tbody>
</table>

**TLV (Threshold Limit Value established by ACGIH)**

| titanium dioxide | A4 |

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

| titanium dioxide |  |

<table>
<thead>
<tr>
<th>GHS label elements Void</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard pictograms Void</td>
<td></td>
</tr>
<tr>
<td>Signal word Void</td>
<td></td>
</tr>
<tr>
<td>Hazard statements Void</td>
<td></td>
</tr>
</tbody>
</table>

| Chemical safety assessment: | A Chemical Safety Assessment has not been carried out. |

**16 Other information**

<table>
<thead>
<tr>
<th>Department issuing MSDS:</th>
<th>Regulatory Affairs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact:</td>
<td>Regulatory Affairs</td>
</tr>
<tr>
<td>Telephone No.</td>
<td>+1 (708) 597-0900</td>
</tr>
<tr>
<td><a href="mailto:sds@gcamerica.com">sds@gcamerica.com</a></td>
<td></td>
</tr>
<tr>
<td>Date of preparation / last revision</td>
<td>02/24/2015 / -</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Abbreviations and acronyms:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GHS: Globally Harmonized System of Classification and Labelling of Chemicals</td>
<td></td>
</tr>
<tr>
<td>HCS: Hazard Communication Standard (USA)</td>
<td></td>
</tr>
<tr>
<td>MSDS: Material Safety Data Sheet</td>
<td></td>
</tr>
<tr>
<td>SDS: Safety Data Sheet</td>
<td></td>
</tr>
<tr>
<td>ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)</td>
<td></td>
</tr>
</tbody>
</table>
Trade name: COE-SOFT (Powder)

ECHA: European Chemicals Agency
OSHA: Occupational Safety and Health Administration (USA)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

Sources

• Manufacturers’ MSDSs/SDSs
• OSHA (https://www.osha.gov/dts/chemicalsampling/toc/chmcas.html)
• TOXNET (http://toxnet.nlm.nih.gov/)
• ECHA (http://echa.europa.eu/)
• EnviChem (www.echemportal.org)

Notes:

CAS Registry Number is a Registered Trademark of the American Chemical Society.
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* Data compared to the previous version altered. This version replaces all previous versions.

Disclaimer:

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MATERIAL SAFETY DATA SHEET

SECTION I – CHEMICAL / PRODUCT AND COMPANY IDENTIFICATION

THE PROCTER & GAMBLE COMPANY
Health Care Research Center
8700 Mason-Montgomery Road
Mason, OH  45040-9462

EMERGENCY PHONE: Transportation Emergency (24 hour) Telephone Number:
CHEMTREC: 1-800-424-9300 in the U.S. and Canada;
1-703-527-3887 for calls originating elsewhere or call
the Poison Control Center

Rating Key: 1=Slight 2=MODERATE 3=HIGH 4=EXTREME
Hazard Rating: Health: 1  Flammability: 0  Reactivity: 0

Material Name: Fixodent Original

Prepared by: Jill Kaimer, CPH
Issue Date: 11/06/07
Last Reviewed: 9/11/06

SECTION II – COMPOSITION AND INGREDIENTS

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200, and/or WHMIS under the HFA. These substances are listed because in their pure bulk form, they meet the OSHA definition of hazardous. Any hazards associated with this finished product are listed in Section III of this MSDS.

Principal Hazardous Components:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>Conc %</th>
<th>Exposure Limit/LC50/LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide</td>
<td>7631-86-9</td>
<td>1-5</td>
<td>20 mppcf (OSHA)</td>
</tr>
<tr>
<td>Mineral Oil</td>
<td>8042-47-5</td>
<td>10-30</td>
<td>5 mg/m^3 (ACGIH)</td>
</tr>
<tr>
<td>Petrolatum, White USP</td>
<td>8009-03-8</td>
<td>15-40</td>
<td>Oral LD50 rat &gt; 5 g/kg</td>
</tr>
</tbody>
</table>

SECTION III – HAZARDS IDENTIFICATION

Emergency Overview: This mixture is a product regulated by the FDA. Within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200]: this mixture is not considered a hazard when used in a manner which is consistent with the labeled directions.

Eye: May cause transient eye irritation.

Skin: Non-irritating to the skin.

Inhalation: Not an inhalation hazard.

Ingestion: Ingestion of large amounts may cause nausea or vomiting. Esophageal blockage could occur in rare cases.

~Verified on 2013-5 by Henry Schein to be the most current version of the SDS. To be verified again on 2016-5. ~
SECTION IV – FIRST AID MEASURES

Eye: Flush eyes with water for 15 minutes.
Skin: If skin irritation occurs, flush thoroughly with cool water.
Inhalation: Not an inhalation hazard.
Ingestion: Discontinue use, see physician or dentist if symptoms persist.

SECTION V – FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Flash Point:</th>
<th>Not applicable</th>
<th>Flash Point test method:</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto-ignition Temperature:</td>
<td>☒ Not applicable</td>
<td>deg. C</td>
<td>deg. F</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UEL</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UEL</td>
<td>%</td>
</tr>
<tr>
<td>Extinguishing Media:</td>
<td>Use water spray, alcohol foam, or carbon dioxide.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosion Hazards:</td>
<td>Material will not burn.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special Instructions:</td>
<td>No applicable information has been found.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION VI – ACCIDENTAL RELEASE MEASURES

Personal Safeguards: Avoid excessive contact with skin.
Environmental Precautions: Prevent from reaching waterways. Landfill for small quantities. Contain spilled material.
Spill Clean-up Procedures:
- Industrial: Wipe up with sorbent material. Collect and place in a suitable disposal container. This material is not known to possess additional hazards when spilled, beyond those of other non-hazardous solids.
- Household: Product used in household may be disposed of in refuse or sewer.

SECTION VII – HANDLING AND STORAGE

Recommended Storage Temperature: Store in a cool, dry place.
Personal Precautions for Safe Storage and Handling: Avoid contact with eyes.
Conditions for Safe Storage: Store at room temperature. Avoid direct sunlight.

SECTION VIII – EXPOSURE CONTROLS, PERSONAL PROTECTION

This section only applies to the product when used in an industrial setting.

Ventilation: Good general ventilation is sufficient for control.
Eye Protection: Wear safety glasses with side shields.
Respiratory Protection: None
Skin Protection: For brief contact normal work attire is sufficient.
Other Special Protection: None
SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Color</td>
<td>Pink Cream</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Physical State</td>
<td>Cream</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>pH</td>
<td>5.0 – 7.0</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Slightly Soluble</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Specific Gravity (H₂O–1)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Other Data</td>
<td></td>
</tr>
</tbody>
</table>

SECTION X – STABILITY AND REACTIVITY

| Stability          | Stable             |
| Possibility of Hazardous Reaction | None known |
| Incompatibility (Materials to avoid) | None known |
| Hazardous Decomposition Products | None known |

SECTION XI – TOXICOLOGICAL INFORMATION

| Chronic Effects | No chronic health effects reported. |
| Target Organs   | No target organs reported. |
| Carcinogenicity | This finished consumer product is not carcinogenic. |
| NTP             | No |
| IARC            | No |

SECTION XII – ECOLOGICAL INFORMATION

Relevant ecotoxicity and fate data for ingredients in this formulation have been reviewed. Under normal and foreseeable consumer uses, there are no concerns for aquatic organisms exposed to product ingredients at the anticipated environmental concentrations. The product is compatible with down-the-drain disposal routes, including municipal wastewater treatment processes and septic tank systems. This product is intended for dispersive use and should not be disposed directly into the environment.
**SECTION XIII - DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Disposal is to be performed in compliance with Federal, State/Provincial and Local regulations.

*Households:* Product is safe for disposal down the drain after use.

*Industrial Setting:*  

<table>
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<tr>
<th>Agency</th>
<th>Parameter</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>US EPA</td>
<td></td>
<td>This product is not considered a hazardous waste when disposed.</td>
</tr>
</tbody>
</table>

**SECTION XIV - TRANSPORTATION**

<table>
<thead>
<tr>
<th>Agency</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>US DOT (transportation by ground)</td>
<td>Non-Regulated</td>
</tr>
<tr>
<td>IMDG (transportation by sea)</td>
<td>Non-Regulated</td>
</tr>
<tr>
<td>IATA (transportation by air)</td>
<td>Non-Regulated</td>
</tr>
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**SECTION XV - ADDITIONAL REGULATORY INFORMATION**

The product(s) described in this Material Safety Data Sheet are regulated under the Federal Food, Drug and Cosmetics Act and are safe to use as per directions on container, box or accompanying literature (where applicable).

**US Federal:**
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- SARA 313/302/304/311/312 chemicals: None

**US States:**
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<thead>
<tr>
<th>Ingredient(s)</th>
<th>CERCLA RQ</th>
<th>State(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide</td>
<td>N/A</td>
<td>CA, IN, KY, MA, MN, NC, NJ, OR, PA</td>
</tr>
</tbody>
</table>

**SECTION XVI - OTHER INFORMATION**

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Material Name: Fixodent Fresh

SECTION II - COMPOSITION AND INGREDIENTS

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200, and/or WHMIS under the HPA. These substances are listed because in their pure bulk form, they meet the OSHA definition of hazardous. Any hazards associated with this finished product are listed in Section III of this MSDS.

<table>
<thead>
<tr>
<th>Principal Hazardous Components:</th>
<th>CAS Number</th>
<th>Conc %</th>
<th>Exposure Limit/ LC50/LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon Dioxide</td>
<td>7631-86-9</td>
<td>1 - 5</td>
<td>20 mppcf (OSHA)</td>
</tr>
<tr>
<td>Mineral Oil</td>
<td>8042-47-5</td>
<td>10 - 30</td>
<td>5 mg/m3 (ACGIH)</td>
</tr>
<tr>
<td>Petrolatum, White USP</td>
<td>8009-03-8</td>
<td>15 - 40</td>
<td>Oral LD50 rat &gt; 5 g/kg</td>
</tr>
</tbody>
</table>

SECTION III - HAZARDS IDENTIFICATION

Emergency Overview: This mixture is a product regulated by the FDA. Within the meaning of the OSHA Hazard Communication Standard [29 CFR 1910.1200]: this mixture is not considered a hazard when used in a manner which is consistent with the labeled directions.

- Eye: May cause transient eye irritation.
- Skin: Non-irritating to the skin.
- Inhalation: Not an inhalation hazard.
- Ingestion: Ingestion of large amounts may cause nausea or vomiting. Esophageal blockage could occur in rare cases.
SECTION IV – FIRST AID MEASURES
Eye: Flush eyes with water for 15 minutes.
Skin: If skin irritation occurs, flush thoroughly with cool water.
Inhalation: Not an inhalation hazard.
Ingestion: Discontinue use, see physician or dentist if symptoms persist.

SECTION V – FIRE FIGHTING MEASURES
Flash Point: Not applicable
Flush Point test method: Not applicable
Auto-ignition Temperature: Not applicable
Not available
deg. C deg. F.
Flammable Limits
( % by volume in air )
LEL % N/A
UEL %
Extinguishing Media: Use water spray, alcohol foam, or carbon dioxide.
Explosion Hazards: Material will not burn.
Special Instructions: No applicable information has been found.

SECTION VI – ACCIDENTAL RELEASE MEASURES
Personal Safeguards: Avoid excessive contact with skin.
Environmental Precautions: Prevent from reaching waterways. Landfill for small quantities.
Contain spilled material.
Spill Clean-up Procedures: Industrial: Wipe up with sorbent material. Collect and place in a suitable disposal container. This material is not known to possess additional hazards when spilled, beyond those of other non-hazardous solids.
Household: Product used in household may be disposed of in refuse or sewer.

SECTION VII – HANDLING AND STORAGE
Recommended Storage Temperature: Store in a cool, dry place.
Personal Precautions for Safe Storage and Handling: Avoid contact with eyes.
Conditions for Safe Storage: Store at room temperature. Avoid direct sunlight.

SECTION VIII – EXPOSURE CONTROLS, PERSONAL PROTECTION
This section only applies to the product when used in an industrial setting:
Ventilation: Good general ventilation is sufficient for control.
Eye Protection: Wear safety glasses with side shields.
Respiratory Protection: None
Skin Protection: For brief contact normal work attire is sufficient.
Other Special Protection: None
**SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance / Color</td>
<td>Pink Cream</td>
</tr>
<tr>
<td>Odor</td>
<td>Faint Minty</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not Available</td>
</tr>
<tr>
<td>Physical State</td>
<td>Cream</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>pH</td>
<td>5.0 – 7.0</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not Available</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Slightly Soluble</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Specific Gravity (H₂O=1)</td>
<td>Not Available</td>
</tr>
<tr>
<td>Other Data</td>
<td>Product complies with State and Federal regulations for VOC content.</td>
</tr>
</tbody>
</table>

**SECTION X – STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Possibility of Hazardous Reaction</td>
<td>None known</td>
</tr>
<tr>
<td>Incompatibility (Materials to avoid)</td>
<td>None known</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>None known</td>
</tr>
</tbody>
</table>

**SECTION XI – TOXICOLOGICAL INFORMATION**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Effects</td>
<td>No chronic health effects reported</td>
</tr>
<tr>
<td>Target Organs</td>
<td>No target organs reported</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>This finished consumer product is not carcinogenic.</td>
</tr>
<tr>
<td>NTP</td>
<td>No</td>
</tr>
<tr>
<td>IARC</td>
<td>No</td>
</tr>
</tbody>
</table>

**SECTION XII – ECOLOGICAL INFORMATION**

Relevant ecotoxicity and fate data for ingredients in this formulation have been reviewed. Under normal and foreseeable consumer uses, there are no concerns for aquatic organisms exposed to product ingredients at the anticipated environmental concentrations. The product is compatible with down-the-drain disposal routes, including municipal wastewater treatment processes and septic tank systems. This product is intended for dispersive use and should not be disposed of directly into the environment.
SECTION XIII – DISPOSAL CONSIDERATIONS

Waste Disposal Method: Disposal is to be performed in compliance with Federal, State/Provincial and Local regulations.

Households: Product is safe for disposal down the drain after use.

Industrial Setting:

<table>
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<tbody>
<tr>
<td>US EPA</td>
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<td>This product is not considered a hazardous waste under US RCRA when disposed.</td>
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SECTION XIV – TRANSPORTATION

<table>
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<tr>
<th>Agency</th>
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MATERIAL SAFETY DATA SHEET

SECTION I – CHEMICAL/PRODUCT AND COMPANY IDENTIFICATION

THE PROCTER & GAMBLE COMPANY
Health Care Research Center
8700 Mason-Montgomery Road
Mason, OH 45040-9462

EMERGENCY PHONE: Transportation Emergency (24 hour) Telephone Number:
CHEMTREC: 1-800-424-9300 in the U.S. and Canada; 1-703-527-3887 for calls originating elsewhere or call the Poison Control Center

Material Name: Fixodent Free

Hazard Rating
RATING KEY
1=EXTREME
3=HIGH
2=MODERATE
1=SLIGHT
Hazard Rating
Health: 1
Flammability: 0
Reactivity: 0

Prepared by: Jim Ramirez, CIH
Issue Date: 11/04/07
Last Reviewed: 9/10/05

SECTION II – COMPOSITION AND INGREDIENTS

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200, and/or WHMIS under the HFA. These substances are listed because they are present in the pure or bulk form, they meet the OSHA definition of hazardous. Any hazards associated with this finished product are listed in Section III of this MSDS.

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SECTION V – FIRE FIGHTING MEASURES

Flash Point: Not applicable
Flash Point test method: Not applicable
Auto-ignition Temperature: ☑ Not applicable ☐ Not available ☐ deg. C ☐ deg. F.
Flammable Limits (% by volume in air): LEL % N/A UEL %
Extinguishing Media: Use water spray, alcohol foam, or carbon dioxide.
Explosion Hazards: Material will not burn.
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Contain spilled material.
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<th>Property</th>
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<tbody>
<tr>
<td>Appearance / Color</td>
<td>Off-white</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not Available</td>
</tr>
<tr>
<td>Physical State</td>
<td>Cream</td>
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<td>Vapor Density</td>
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Other Data: Product complies with State and Federal regulations for VOC content.

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--Verified on 2013-5 by Henry Schein to be the most current version of the SDS. To be verified again on 2016-5.--
**Document Detail**

Type: 0560-SDS  
Document No.: 0560-1721500MS[2]  
Title: Schein MaxiTabs Ultrasonic Cleaning Tablets, General Purpose SDS  
Comment  
Status: CURRENT  
Effective Date: 17-Jul-2014

**Approvals**

<table>
<thead>
<tr>
<th>Role</th>
<th>Sign-off By</th>
<th>Sign-off Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sultan Document Control</td>
<td>Melissa Worthington</td>
<td>15-Jul-2014 8:30 pm GMT</td>
</tr>
<tr>
<td>Sultan Document Control</td>
<td>Sheila Grant</td>
<td>15-Jul-2014 7:53 pm GMT</td>
</tr>
<tr>
<td>Sultan Marketing Manager Approver</td>
<td>Mark Trimmer</td>
<td>16-Jul-2014 8:34 pm GMT</td>
</tr>
<tr>
<td>Sultan QA/RA Approver</td>
<td>Sheila Grant</td>
<td>15-Jul-2014 8:35 pm GMT</td>
</tr>
<tr>
<td>Sultan New Business Development Approver</td>
<td>Clark Smith</td>
<td>16-Jul-2014 8:10 pm GMT</td>
</tr>
<tr>
<td>Sultan Operations Approver</td>
<td>Joe Santos</td>
<td>15-Jul-2014 8:33 pm GMT</td>
</tr>
</tbody>
</table>
Safety Data Sheet


Date Issued: 22 June 2009
Document Number: 1721500MS
Date Revised: 23 June 2014
Ref. document number: 0021500MS [4]
Revision Number: 2

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier:
Trade Name (as labeled): Schein MAXITABS General Purpose Ultrasonic Cleaning Tablets
Part/Item Number: 900-4088

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against:
Recommended Use: Ultrasonic cleaning tablets
Restrictions on Use: For professional use only

1.3 Details of the Supplier of the Safety Data Sheet:
Manufacturer/Supplier Name: Henry Schein, Inc.
Manufacturer/Supplier Address: 135 Duryea Road, Melville, NY
Manufacturer/Supplier Telephone Number: 800-472-4346 (Product Information)
Email address: customer.service@henryschein.com

1.4 Emergency Telephone Number:
Emergency Contact Telephone Number: 800-424-9300 (Chemtree)

2. HAZARD(s) IDENTIFICATION

2.1 Classification of the Substance or Mixture:

GHS Classification:

<table>
<thead>
<tr>
<th>Health</th>
<th>Environmental</th>
<th>Physical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity Category 4 (H302)</td>
<td>Not hazardous</td>
<td>Not hazardous</td>
</tr>
<tr>
<td>Eye Damage Category 1 (H318)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Target Organ Toxicity – Single Exposure Category 3 (H335)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toxic to Reproduction Category 1B (H360Df)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EU Classification (1999/45/EC as amended): Toxic (T) (Rep Cat 2), Harmful (Xn), Irritant (Xi)
EU Risk (R) Phrases: R22, R37, R41, R61, R62

Refer to Section 16 for the full text of the EU Classifications and R Phrases.

2.2 Labeling Elements: Contains Sodium Perborate, Sodium dodecylbenzenesulfonate, Alcohols, C10-12, ethoxylated, propoxylated
Hazard Statements

H302 Harmful if swallowed.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H360Df May damage the unborn child. Suspected of damaging fertility.

Precautionary Statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing vapors or spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves, protective clothing, eye protection or face protection.
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330 Rinse mouth.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER or doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor.
P308 + P313 IF exposed or concerned: Get medical attention.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None

3. COMPOSITION AND INFORMATION ON INGREDIENTS

3.2 Mixture

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>C.A.S. # / EC#</th>
<th>IUPAC Name</th>
<th>Substance Classification (EC No 1272/2008)</th>
<th>WT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Carbonate</td>
<td>497-19-8 / 207-838-8</td>
<td>disodium carbonate</td>
<td>Eye Irrit. 2; H319 Xi R36</td>
<td>20-30</td>
</tr>
<tr>
<td>Citric Acid</td>
<td>77-92-9 / 201-069-1</td>
<td>2-hydroxypropane-1,2,3-tricarboxylic</td>
<td>Eye Irrit 2 H319 Xi R36</td>
<td>20-30</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
<td>144-55-8 / 205-633-8</td>
<td>sodium hydrogen carbonate</td>
<td>Not classified as hazardous Not classified as dangerous</td>
<td>15-20</td>
</tr>
<tr>
<td>Sodium Perborate</td>
<td>7632-04-4 / 231-556-4</td>
<td>sodium oxidoxy(oxo)borane</td>
<td>Oxid. Sol. 2; H272 Repr. 1B; H360Df Acute Tox. 4 ; H302</td>
<td>10-20</td>
</tr>
</tbody>
</table>
The exact concentration is being withheld as a trade secret.

Refer to Section 16 for the full text of the GHS and EU Classifications.

### 4. FIRST-AID MEASURES

#### 4.1 Description of First Aid Measures:

<table>
<thead>
<tr>
<th>Routes of Exposure</th>
<th>First Aid Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eye</strong></td>
<td>Immediately flush eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Get medical attention.</td>
</tr>
<tr>
<td><strong>Skin</strong></td>
<td>Immediately wash skin thoroughly with soap and water. Get medical attention if irritation develops</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td>If irritation develops, remove from exposure and get medical attention.</td>
</tr>
<tr>
<td><strong>Ingestion</strong></td>
<td>Do not induce vomiting. Rinse mouth with water and give one glass of water to drink. Never give anything by mouth to an unconscious or convulsing person. Get immediate medical attention.</td>
</tr>
</tbody>
</table>

#### 4.2 Most Important Symptoms and Effects, Both Acute and Delayed:

Causes severe eye irritation. May cause skin irritation. Inhalation of dust may cause upper respiratory tract irritation.

#### 4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed:

If eye contact occurs, get immediate medical attention. If swallowed, get immediate medical attention.

**Note to Physicians (Treatment, Testing, and Monitoring):** Treatment of overexposure should be directed at the control of symptoms and clinical conditions.
5. FIRE-FIGHTING MEASURES

5.1 Extinguishing Media

Use media appropriate for surrounding fire.

5.2 Special Hazards Arising from the Substance or Mixture:

Product may release oxygen at high temperatures which may enhance combustion of other materials.

5.3 Advice for Fire-Fighters:

<table>
<thead>
<tr>
<th>Fire Fighting Procedures:</th>
<th>Cool fire exposed containers and structures with water.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautions for Fire Fighters:</td>
<td>Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing for all fires involving chemicals.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended Protective Equipment for Fire Fighters:</th>
</tr>
</thead>
<tbody>
<tr>
<td>EYES/FACE</td>
</tr>
<tr>
<td><img src="image1" alt="EYES/FACE" /></td>
</tr>
</tbody>
</table>

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Wear appropriate protective clothing; gloves and eye protection.

<table>
<thead>
<tr>
<th>Recommended Personal Protective Equipment for Containment and Clean-up:</th>
</tr>
</thead>
<tbody>
<tr>
<td>EYES/FACE</td>
</tr>
<tr>
<td><img src="image1" alt="EYES/FACE" /></td>
</tr>
</tbody>
</table>

6.2 Environmental Precautions:

Prevent spill from entering sewers and water courses. Report releases as required by local and national authorities.

6.3 Methods and Material for Containment and Cleaning up:

Pick up and place tablets into an appropriate container for use or disposal. Wipe spill area with damp cloth to avoid dust dispersal.
6.4 Reference to Other Sections:
Refer to Section 8 for Personal Protective Equipment and Section 13 for Disposal information.

7. HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
Avoid contact with the eyes, skin and clothing. Avoid breathing dust. Wear appropriate protective clothing and equipment. Use with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use.

7.2 Conditions for Safe Storage, Including Any Incompatibilities:
Store in a cool, dry, well ventilated area away from incompatible materials. Protect from physical damage.

7.3 Specific End Use(s): For professional use only.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

<table>
<thead>
<tr>
<th>Occupational Exposure Limits:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Perborate</td>
</tr>
<tr>
<td>United States 2 mg/m3 TWA ACGIH TLV (inhalable) (as borate compounds)</td>
</tr>
<tr>
<td>Germany None Established</td>
</tr>
<tr>
<td>United Kingdom None Established</td>
</tr>
<tr>
<td>France None Established</td>
</tr>
<tr>
<td>Spain None Established</td>
</tr>
<tr>
<td>Italy None Established</td>
</tr>
<tr>
<td>European Union None Established</td>
</tr>
<tr>
<td>Sodium Carbonate</td>
</tr>
<tr>
<td>United States None Established</td>
</tr>
<tr>
<td>Germany None Established</td>
</tr>
<tr>
<td>United Kingdom None Established</td>
</tr>
<tr>
<td>France None Established</td>
</tr>
<tr>
<td>Spain None Established</td>
</tr>
<tr>
<td>Italy None Established</td>
</tr>
<tr>
<td>European Union None Established</td>
</tr>
<tr>
<td>Sodium Bicarbonate</td>
</tr>
<tr>
<td>United States None Established</td>
</tr>
<tr>
<td>Germany None Established</td>
</tr>
<tr>
<td>United Kingdom None Established</td>
</tr>
<tr>
<td>France None Established</td>
</tr>
<tr>
<td>Spain None Established</td>
</tr>
<tr>
<td>Italy None Established</td>
</tr>
<tr>
<td>Substance</td>
</tr>
<tr>
<td>----------------------------------------</td>
</tr>
<tr>
<td>European Union</td>
</tr>
<tr>
<td>Citric Acid</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Spain</td>
</tr>
<tr>
<td>Italy</td>
</tr>
<tr>
<td>European Union</td>
</tr>
<tr>
<td>Alcohols, C10-12, ethoxylated, propoxylated</td>
</tr>
<tr>
<td>United States</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Spain</td>
</tr>
<tr>
<td>Italy</td>
</tr>
<tr>
<td>European Union</td>
</tr>
<tr>
<td>Sodium dodecylbenzenesulfonate</td>
</tr>
<tr>
<td>United States</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Spain</td>
</tr>
<tr>
<td>Italy</td>
</tr>
<tr>
<td>European Union</td>
</tr>
<tr>
<td>Sodium Benzoate</td>
</tr>
<tr>
<td>United States</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Spain</td>
</tr>
<tr>
<td>Italy</td>
</tr>
<tr>
<td>European Union</td>
</tr>
<tr>
<td>Polyethylene Glycol</td>
</tr>
<tr>
<td>United States</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Spain</td>
</tr>
<tr>
<td>Italy</td>
</tr>
</tbody>
</table>
European Union  None Established

**Biological Exposure Limits:** None Established.

### 8.2 Exposure Controls:

**Appropriate Engineering Controls:** No special controls required.

**Individual Protection Measures (PPE)**
- **Specific Eye/face Protection:** Chemical safety glasses recommended.
- **Specific Skin Protection:** Wear impervious gloves such as rubber. Recommended glove: Rubber. Consult glove supplier for thickness and breakthrough times.
- **Specific Respiratory Protection:** None required under normal use conditions. If the exposure levels are exceeded, an approved particulate respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.
- **Specific Thermal Hazards:** Not applicable

<table>
<thead>
<tr>
<th><strong>Recommended Personal Protective Equipment:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EYES/FACE</strong></td>
</tr>
<tr>
<td><img src="image" alt="Eye Protection" /></td>
</tr>
</tbody>
</table>

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on Basic Physical and Chemical Properties:

<table>
<thead>
<tr>
<th><strong>Appearance:</strong></th>
<th>Light green tablet</th>
<th><strong>Explosive limits:</strong></th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Odor:</strong></td>
<td>Mint fragrance</td>
<td><strong>Vapor pressure:</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Odor threshold:</strong></td>
<td>Not available</td>
<td><strong>Vapor density:</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>pH:</strong></td>
<td>8.0-9.9 (1% Solution)</td>
<td><strong>Relative density:</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Melting/freezing point:</strong></td>
<td>Not available</td>
<td><strong>Solubility:</strong></td>
<td>Soluble</td>
</tr>
<tr>
<td><strong>Initial boiling point and range:</strong></td>
<td>Not applicable</td>
<td><strong>Partition coefficient: n-octanol/water:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>Not flammable</td>
<td><strong>Auto-ignition temperature:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Evaporation rate:</strong></td>
<td>Not applicable</td>
<td><strong>Decomposition temperature:</strong></td>
<td>Not available</td>
</tr>
<tr>
<td><strong>Flammability:</strong></td>
<td>Not flammable</td>
<td><strong>Viscosity:</strong></td>
<td>Not available</td>
</tr>
</tbody>
</table>
### 9.2 Other Information:

None available

### 10. STABILITY AND REACTIVITY

**10.1 Reactivity:** May react with incompatible materials.

**10.2 Chemical Stability:** Stable.

**10.3 Possibility of Hazardous Reactions:** May corrode copper, zinc, aluminum and their alloys.

**10.4 Conditions to Avoid:** Avoid excessive heat.

**10.5 Incompatible materials:** Avoid reducing agents, acids, calcium hydroxide, ferric salts, metal nitrates and alkali carbonates and bicarbonates.

**10.6 Hazardous Decomposition Products:** Thermal decomposition may produce carbon, sulfur and sodium oxides, benzoic acid and oxygen.

### 11. TOXICOLOGICAL INFORMATION

**11.1 Information on Toxicological Effects:**

**Potential Health Effects:**

**Eyes:** May cause severe irritation or burns with redness, tearing and blurred vision. Corneal damage may occur.

**Skin:** May cause skin irritation. Prolonged overexposure to sodium perborate may cause allergic contact dermatitis.

**Ingestion:** Swallowing may cause chemical burns of the mouth and esophagus, acidosis, calcium deficiency, changes in blood chemistry and muscle weakness. Large amount may be fatal.

**Inhalation:** Inhalation of dust may cause irritation of the mucous membranes and upper respiratory tract with coughing, sneezing and difficulty in breathing.

**Chronic Health Effects:** Prolonged overexposure to borates may cause kidney damage.

**Carcinogenicity:** None of the other components of this product are listed as carcinogens by OSHA, IARC, ACGIH, NTP or EU Directives.

**Mutagenicity:** Sodium Perborate was positive in the AMES test. Chinese-hamster-ovary cells underwent extensive chromosomal damage when treated with sodium-perborate. Sodium dodecylbenzenesulfonate added to hamster lung cell culture at 62.5 μg/ml induced cell mutations but no effects on sister chromatid exchange.

**Medical Conditions Aggravated by Exposure:** Employees with pre-existing eye, skin and respiratory disorders may be at increased risk from exposure.

**Acute Toxicity Data:**

- Sodium Carbonate: Oral rat LD50 4,090 mg/kg; Inhalation rat LC50 2,300 mg/m3/2 hr.
- Citric Acid: Oral rat LD50 6,730 mg/kg
- Sodium Bicarbonate: Oral rat LD50 4,220 mg/kg
Sodium dodecyl benzenesulfonate: Oral rat LD50 800 mg/kg
Polyethylene glycol: Oral rat LD50 27,500mg/kg

**Reproductive Toxicity Data:** Rats and dogs received perboric acid, sodium salt with their feed. Accumulation occurs in the testes; germ cell depletion and testicular atrophy were reported. Sodium Carbonate: No adverse reproductive or developments effects were found in studies at 340 mg/kg in mice, 240 mg/kg in rats and 179 mg/kg in rabbits. In a two-generation 90 days study with male and female rats fed 1.2 % citric acid, no adverse effects on reproductive or teratogenicity were seen. (NOEL = 2500 mg/kg/day)

**Specific Target Organ Toxicity (STOT):**
**Single Exposure:** In an irritancy study with rabbits, ten microl of sodium perborate was applied directly into the eye. Assessments were made 3 hours after dosing and periodically for 35 days. Corneal changes indicated sodium borate caused irritation. In humans, high concentrations of sodium perborate in the mouth may cause chemical burns, low resistance to trauma, and retraction of gums. Sodium carbonate is irritating to rabbit skin. Citric acid causes moderate irritation to rabbit skin, severe irritation to rabbit eyes. Citric acid caused a 71% fall in blood pressure in rats at doses of 15 mg/m3.

**Repeated Exposure:** Sodium Carbonate: Rats were exposed to a 2% aqueous solution (aerosol) for 4 hr/day, 5 days/wk, for 3.5 months causing damage to the lungs. A 2-year chronic oral study in rats being given 5% or 3% citric acid in feed showed a NOAEL of 1,200 mg/kg/day. In another study, an NOAEL of 1,500 mg/kg/day for rabbits and 1,400 mg/kg/day for dogs was determined.

### 12. ECOLOGICAL INFORMATION

**12.1 Toxicity:**
Calcium Carbonate: 96 hr LC50 Gambusia affinis (Western mosquitofish) >56,000 mg/L
Citric Acid: 48 hr LC50 Carcinus maenas (Green or European shore crab) 160 mg/L

**12.2 Persistence and Degradability:** Biodegradation is not applicable to inorganic substances. Sodium dodecyl benzenesulfonate is readily biodegradable (75% in 11 days).

**12.3 Bio-accumulative Potential:** Citric Acid: Bio-accumulation is expected to be low.

**12.4 Mobility in Soil:** Citric acid and sodium dodecyl benzenesulfonate are expected to have a high mobility in soil. No other data available.

**12.5 Results of PBT/PvB Assessment:** Not required

**12.6 Other Adverse Effects:** None known.

### 13. DISPOSAL CONSIDERATIONS

**13.1 Waste Treatment Methods:**

**Regulations:** Dispose in accordance with local and national environmental regulations.

**Properties (Physical/Chemical) Affecting Disposal:** None known.

**Waste Treatment Recommendations:** None needed.
14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>14.1 UN Number</th>
<th>14.2 UN Proper Name</th>
<th>14.3 Hazard Class(s)</th>
<th>14.4 Packing Group</th>
<th>14.5 Environmental Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>ADR/RID</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>IMDG</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>IATA/ICAO</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

14.6 Special precautions for user: Not applicable

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable – product is transported only in packaged form.

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

U.S. Federal Regulations

Comprehensive Environmental Response and Liability Act of 1980 (CERCLA): This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Toxic Substances Control Act (TSCA): This product is a medical device and not subject to chemical notification requirements.

Clean Water Act (CWA): Not Listed

Clean Air Act (CAA): Not Listed

Superfund Amendments and Reauthorization Act (SARA) Title III Information:

SARA Section 311/312 (40 CFR 370) Hazard Categories:

<table>
<thead>
<tr>
<th>Immediate Hazard:</th>
<th>Pressure Hazard:</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delayed Hazard:</td>
<td>Reactivity Hazard:</td>
<td>No</td>
</tr>
<tr>
<td>Fire Hazard:</td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>

This product contains the following toxic chemical(s) subject to reporting requirements of SARA Section 313 (40 CFR 372):

<table>
<thead>
<tr>
<th>Components</th>
<th>C.A.S. #</th>
<th>WT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
State Regulations

California: This product contains the following chemicals(s) known to the State of California to cause cancer, birth defects or reproductive harm:

<table>
<thead>
<tr>
<th>Components</th>
<th>C.A.S. #</th>
<th>WT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

International Regulations

EU REACH: The substances in this product comply with the EU REACH regulation as applicable.

16. OTHER INFORMATION

Full text of Classification abbreviations used in Section 2 and 3:
O Oxidizer
Xi Irritant
Xn Harmful
T Toxic
Repr. Cat. 2 Reproductive Category 2
R8 Contact with combustible material may cause fire.
R22 Harmful if swallowed.
R36 Irritating to eyes.
R37 Irritating to respiratory system.
R38 Irritating to skin.
R41 Risk of serious damage to eyes.
R61 May cause harm to the unborn child.
R62 Possible risk of impaired fertility.
Oxid. Sol. 2; Oxidizing Solid Category 2
Repr. 1B Reproductive Toxicity Category 1B
Acute Tox. 4 Acute Toxicity Category 4
STOT SE 3 Specific Target Organ Toxicity (Single Exposure) Category 3
Eye Dam. 1 Eye Damage Category 1
Eye Irrit. 2 Eye Irritant Category 2
H272 May intensify fire; oxidiser.
H302 Harmful if swallowed.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H360Df May damage the unborn child. Suspected of damaging fertility.

Supersedes: 26 August 2011
Revision Summary: Comprehensive review, new format.

Date of SDS Preparation/Revision: 23 June 2014

Data Sources: US NLM ChemID Plus and HSDB, Substance SDS for components, IUCLID Dataset EU Chemical Bureau, ESIS, Country websites for occupational exposure limits.
Safety Data Sheet: Acclean Dental Prophylaxis Paste with Sodium Fluoride

SECTION 1: IDENTIFICATION

Product Name: Acclean Dental Prophylaxis Paste with Fluoride
Product Classification: Prophylaxis Paste
Active Ingredient: Sodium Fluoride
Manufactured By: Henry Schein, Inc.
135 Duryea Road
Melville, NY 11747
Telephone: 1-800-472-4346
Emergency Number: Chemtrec 1-800-424-9300
Date Prepared: January 27, 2015
Supersedes Date: December 5, 2014
Product Use: For cleaning and polishing procedures as a part of a professionally administered prophylaxis treatment.

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

- Will cause eye irritation
- May cause skin irritation
- Prolonged exposure may cause respiratory system irritation
- Ingestion may cause nausea, vomiting, headache, or dizziness
- Please read entire SDS for additional information

Potential Health Effects, Signs, and Symptoms of Exposure:

Eye: Splashing into eye may cause redness of the eye.
Skin: Repeated/prolonged contact with skin may cause irritation of the skin. Symptoms include: redness, burning, itching.
Inhalation: Fine/small particles, if inhaled, may lead to respiratory irritation. Symptoms include: a feeling of tightness of the chest.
Ingestion: Ingesting small amounts during normal handling and use is not likely to cause harmful effects. Symptoms include: nausea, vomiting, headache, or dizziness.

Please refer to Section 11, Toxicological Information for details.

Date of Issue: January 27, 2015
### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical ID</th>
<th>CAS #</th>
<th>EL NECS #</th>
<th>EI NECS Name</th>
<th>Exposure OSHA (TWA / STEL)</th>
<th>Limits ACGIH</th>
<th>Carcinogen</th>
<th>% (By Weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Fluoride</td>
<td>7681-49-4</td>
<td>231-667-8</td>
<td>Sodium Fluoride</td>
<td>3ppm/6ppm</td>
<td>2.5mg/m³</td>
<td>Not Listed</td>
<td>2 – 3</td>
</tr>
<tr>
<td>Glycerol</td>
<td>56-81-5</td>
<td>200-289-5</td>
<td>Glycerin (as respirable, mist)</td>
<td>(as mist) TWA=5mg/m³</td>
<td>Not Listed</td>
<td>20 - 40</td>
<td></td>
</tr>
</tbody>
</table>

**Sodium Fluoride:**
- **Danger Symbol:** GHS06 (T), GHS07 (Xi)
- **Hazard Statement:** H301 (R25), EUH032 (R32), H315 (R38), H319 (R36)
- **Precautionary Statement:** P102 (S2), P260 (S23), P280 (S36/37/39), P309+314 (S45)

**Glycerin:**
- **Danger Symbol:** GHS07 (Xi)
- **Hazard Statement:** H315 (R38), H319 (R36)
- **Precautionary Statement:** P404 (S7), P403+235 (S3/9)

Please refer to Section 16 for **Hazard and Precautionary Statement Key**

### SECTION 4: FIRST AID MEASURES

The following first aid recommendations are based on an assumption that appropriate personal hygiene and industrial hygiene practices are followed.

**Eye Contact:**
Flush eyes with large amounts of water, including under eyelids. If signs/symptoms persist, seek medical attention.

**Skin Contact:**
Wash thoroughly with soap and water. Remove contaminated clothing. If signs/symptoms persist, seek medical attention.

**Inhalation:**
Move into fresh air. If having difficulty breathing, administer oxygen. If signs/symptoms persist, seek medical attention.

**Ingestion:**
Induce vomiting and seek medical attention. In the case of a child who has swallowed approximately 10g of paste, seek immediate medical attention. In the case of an adult who has swallowed approximately 100g of paste, seek immediate medical attention.

### SECTION 5: FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Flash Point (°F/°C)</th>
<th>Flammable Limit (vol%)</th>
<th>Auto-Ignition Temperature (vol%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Extinguishing Media:** Suitable extinguishing material for the surrounding fire should be used.

**Firing Fighting Instruction:** During a fire, irritating or highly toxic gases may be generated by thermal decomposition. If potential for exposure, wear complete personal protective equipment, including: self-contained breathing apparatus. Fight fire from a safe distance.

**Unusual Hazards:** Evacuate all personnel.
## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Spill or Release Procedures**

**Minor Spills:** Clean-up immediately, avoid contact with skin and eyes. Mop area and clean with soapy water.

**Major Spills:** Clear area of personnel. Restrict access to area. Avoid contact with skin and eyes, mop/s. Collect contaminated water squeegee area with soapy water and dispose of properly.

## SECTION 7: HANDLING AND STORAGE

**Handling:** Limit all unnecessary contact. Avoid breathing dust/vapors. Wear appropriate PPE.

**Storage:** Store in a cool, well ventilated area away from heat, sparks, and flame. Keep containers closed when not in use. Keep in original container provided by manufacturer.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** General exhaust is adequate under normal operating conditions.

**General PPE:** To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment done in accordance with OSHA PPE Standard (29CFR1910.132) or with European Standard EN166, be completed before using this product.

**Eye/ Face Protection:** Safety glasses/goggles, or splash shields, are required when handling. Ensure an eye-wash station is on-hand.

**Skin Protection:** No special equipment for minor exposure (i.e. when handling small quantities), but, it is recommended that impermeable clothing (gloves, apron, boots, or whole body suit) to prevent any contact with this product.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Odor &amp; Odor Threshold</th>
<th>pH</th>
<th>Specific Gravity</th>
<th>Viscosity</th>
<th>% Volatile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colored paste</td>
<td>Odor of Stated Flavor</td>
<td>6–8</td>
<td>(H2O = 1): N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Boiling Point / Freezing Point</th>
<th>Decomposition Temperature</th>
<th>Octanol/ Water Partitioning Coefficient (Log Po/w)</th>
<th>Vapor Pressure</th>
<th>Vapor Density</th>
<th>Evaporation Rate</th>
<th>Ignition</th>
<th>Solubility in Water (20°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/DA</td>
<td>N/DA</td>
<td>NA</td>
<td>NA</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flash Point (°F/°C)</th>
<th>Flammable Limit</th>
<th>Auto-Ignition Temperature (vol%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/DA</td>
<td>N/A</td>
</tr>
</tbody>
</table>
SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.
Hazardous Decomposition Products: Toxic Fumes (HF).
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11: TOXICOLOGY INFORMATION

<table>
<thead>
<tr>
<th>Active Oral Toxicity</th>
<th>Active Toxicity to Invertebrates</th>
<th>Acute Inhalation Toxicity</th>
<th>Irritation – Skin</th>
<th>Irritation - Eye</th>
<th>Sensitization</th>
<th>Mutagenicity</th>
<th>Sub-Chronic Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/DA</td>
<td>N/DA</td>
<td>N/DA</td>
<td>N/DA</td>
<td>N/DA</td>
<td>N/DA</td>
<td>N/DA</td>
<td>N/DA</td>
</tr>
</tbody>
</table>

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological Information: Not determined.
Chemical Fate Information: Not determined.

SECTION 13: DISPOSAL CONSIDERATION

Dispose of in compliance with governmental regulations.
Dispose of container and unused contents in accordance with local, state, and federal requirements. For EU Member States, please refer to any relevant Community provisions relating to waste. In their absence, it is useful to remind the user that national or regional provisions may be in force.

SECTION 14: TRANSPORTATION INFORMATION

<table>
<thead>
<tr>
<th>UN Number</th>
<th>UN Proper Shipping Name</th>
<th>Hazard Class(s)</th>
<th>Packing Group</th>
<th>Environmental Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOT</td>
<td>None</td>
<td>None</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ADR (road)</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>RID (rail)</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IMDG (sea)</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>Not applicable</td>
</tr>
<tr>
<td>IATA/ICAO (air)</td>
<td>None</td>
<td>Not Regulated</td>
<td>None</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Other Information: N/A

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations:

Clean Air Act HAP/ODS: This product contains the following HAPs or ODSs: NONE.
Clean Water Act: Priority Pollutant: This product contains the following chemicals listed under the US Clean Water Act Priority Pollutant and Hazardous Substance List: NONE.
Safety Data Sheet: Acclean Dental Prophylaxis Paste with Sodium Fluoride

FDA: Food Packaging Status: This product has not been cleared by the USFDA for use in food packaging and/or other applications as an indirect food-packaging additive.

Occupational Safety and Health: This product is considered to be hazardous under the Its hazards are: NONE.

RCRA: This product contains the following chemicals which are considered to be hazardous waste under RCRA (40CFR261): NONE.

SARA Title III: Section 302 (RQ): This product contains no chemicals regulated under Section 302 as extremely hazardous substances.

SARA Title III: Section 304 (TPQ): This product is considered hazardous under the OSHA Hazard Communication Standard and is regulated under Section 311-312 (40CFR370). Its hazards are: SODIUM FLUORIDE (CAS # 7681-49-4, Corrosive).

SARA Title III: Section 311-312: This product contains chemicals regulated under Section 304 as extremely hazardous chemicals for emergency release notification (CERCLA List): SODIUM FLUORIDE (CAS # 7681-49-4, 1000 RQ #).

SARA Title III: Section 313: This product contains the following chemicals which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40CFR372: NONE.

TSCA Section 8(b): Inventory: This product contains chemicals listed on the TSCA Inventory, or otherwise complies with TSCA pre-manufacture notification requirements: SODIUM FLUORIDE (CAS # 7681-49-4).

TSCA Significant New Use Rule: None of the chemicals in this material have an SNUR under TSCA.

State Regulations: Contact E. C. Moore for more information

CDSL: Canadian Inventory: Sodium Fluoride (CAS # 7681-49-4)
Glycerol (CAS # 56-81-5)
Safety Data Sheet: Acclean Dental Prophylaxis Paste with Sodium Fluoride

Labeling According to EC Directives – 1272/ 2008 (CLP) and 1999/ 45/ EC
(items in parenthesis relate to 1999/ 45/ EC)

European Community:
- **DANGER SYMBOLS:** GHS07 (X) – Warning/Irritant
- **HAZARD STATEMENTS:** H302, Harmful if swallowed; H315, Causes skin irritation; H319, Causes serious eye irritation
- **PRECAUTIONARY STATEMENTS:** See Section 16

**SECTION 16: OTHER INFORMATION**

EU Classes and Risk/ Safety Phases for Referenced Ingredients (See Section 2)

**Danger Symbols:**
- GHS07 – Warning/Irritant

**Hazard Statements:**
- R25 – Harmful if swallowed
- R32 – Contact with acids liberates toxic gas
- R36/37/38 – Irritating to eyes, respiratory system, and skin

**Precautionary Statements:**
- P102 – Keep out of reach of children
- P264 – Wash hands after use, rinse oral cavity and expectorate fluid
- P270 – Do not eat, drink, or smoke while using this product
- P280 – Wear protective gloves/protective clothing/eye protection/face protection
- P330 – Rinse mouth
- P301+P312 – IF SWALLOWED: Call a POISON CENTER or a medical professional if you feel unwell
- P302+P352 – IF ON SKIN: Wash with plenty of water
- P322+P333 – If skin irritation occurs: Get medical advice/attention
- P305+P351+P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
- P337+P313 – If eye irritation persists get medical advice/attention
- P309+314 (S45) – If exposed, or you feel unwell, seek medical advice/attention
Hazard Rating System (Pictograms)

NFPA:

HMIS:

The information presented herein was obtained from sources considered to be reliable. However, this information is provided without any warranty, expressed or implied, regarding its correctness or suitability for consumers intended use and/or application. For this and other reasons, EC Moore assumes no responsibility and expressly disclaims liability for loss, damage, or expense arising out of any way connected with the handling, storage, use, or disposal of this product. This SDS was expressly prepared for this product. Use the materials only as directed. If the product is used as a component in another product, the information contained within this SDS may not be applicable.
SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form : Mixture
Product name : Nanohybrid Flowable Composite
Other means of identification : Flowable Composite

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture : For Professional Dental Use

1.3. Details of the supplier of the safety data sheet
Henry Schein, Inc.
135 Duryea Road
Melville, NY 11747
1-800-424-9300
www.henryschein.com

1.4. Emergency telephone number
Emergency number : CHEMTREC
800-424-9300 (USA)
001-703-527-3887 (Outside USA)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
The product as manufactured is a solid composed of encapsulated chemical ingredients. No hazardous exposures are anticipated during normal product handling and use conditions.

GHS-US classification
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Skin Sens. 1 H317
Repr. 1A H360

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) :
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

~Verified on 2014-10 by Henry Schein to be the most current version of the SDS. To be verified again on 2017-10. ~
Precautionary statements (GHS-US):

- P201 - Obtain special instructions before use
- P202 - Do not handle until all safety precautions have been read and understood
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
- P264 - Wash ... thoroughly after handling
- P272 - Contaminated work clothing should not be allowed out of the workplace
- P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water
- P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P308+P313 - IF exposed or concerned: Get medical advice/attention
- P321 - Specific treatment (see ... on this label)
- P332+P313 - If skin irritation occurs: Get medical advice/attention
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention
- P337+P313 - If eye irritation persists: Get medical advice/attention
- P362 - Take off contaminated clothing
- P362+P364 - Take off contaminated clothing and wash it before reuse
- P405 - Store locked up
- P501 - Dispose of contents/container to ...
SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general: If medical advice is needed, have product container or label at hand.
First-aid measures after inhalation: Immediately seek fresh air. Open windows and/or doors to increase ventilation. Seek medical attention if symptoms persist.
First-aid measures after skin contact: If irritation occurs and product is on the skin, rinse thoroughly with water, followed by a thorough washing of the affected area with soap and water. If irritation, redness or swelling persists, contact a physician immediately.
First-aid measures after eye contact: Flush with copious amounts of water. Seek medical attention if symptoms persist.
First-aid measures after ingestion: If ingested, do not induce vomiting. If product has been swallowed, drink plenty of water or milk. If the patient is vomiting, continue to offer water or milk. Never give anything by mouth to an unconscious person. Provide an estimate of the time at which the material was ingested and the amount of the substance that was swallowed. Seek medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed
If medical advice is needed, have product container or label at hand.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Use Chemical Foam, CO2, Dry Chemical Powder, Water Spray. NOTE: Water may be ineffective in extinguishing the fire.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Material may burn if exposed to flame.
Reactivity: Stable at ambient temperature and under normal conditions of use.

5.3. Advice for firefighters
Protection during firefighting: Firefighters should wear full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
General measures: No special measures required.

6.1.1. For non-emergency personnel
No additional information available

6.1.2. For emergency responders
No additional information available
6.2. Environmental precautions

Keep spills and cleaning runoffs out of sewers and open bodies of water. Spills on porous surfaces can contaminate the ground water. Dispose of in accordance with Federal, State and Local regulations, or appropriate governing standards.

6.3. Methods and material for containment and cleaning up

For containment: If possible, stop flow of product.

Methods for cleaning up: Evacuate the spill area. Maximize ventilation by opening doors and windows. Eliminate all sources of ignition. Use self-contained breathing apparatus and protective clothing, (e.g. goggles and gloves). Use non-sparking tools ONLY and dispose of the material in proper closed container(s).

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: No special handling required.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep package closed and store in a cold dry place.

Incompatible materials: None known.

7.3. Specific end use(s)

For Professional Dental Use

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls: None required under normal product handling conditions.

Hand protection: Chemical resistant gloves should be worn when prolonged or repeated skin contact is expected.

Eye protection: Safety glasses or chemical splash goggles may be worn, if necessary.

Skin and body protection: None required under normal product handling conditions.

Respiratory protection: A respirator should be worn whenever workplace conditions warrant its' use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Solid

Appearance: Filled resin

Odour: Characteristic

Odour threshold: No data available

pH: No data available
Relative evaporation rate (butylacetate=1): No data available
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Self ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
Specific gravity: 1.6 g/cc @ 25°C/77°F
Solubility: No data available
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidising properties: No data available
Explosive limits: No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
Stable at ambient temperature and under normal conditions of use.

10.2. Chemical stability
Stable at standard temperature and pressure.

10.3. Possibility of hazardous reactions
May occur in large quantities.

10.4. Conditions to avoid
None

10.5. Incompatible materials
High temperatures, visible light sources, strong oxidizing agents. Keep away from sunlight and open flames.

10.6. Hazardous decomposition products
Oxides of carbon when burned.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity: Not classified
Triethylene glycol dimethacrylate (109-16-0)

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>10837 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE (oral)</td>
<td>10837 mg/kg</td>
</tr>
</tbody>
</table>

Chemical frits (65997-18-4)

| LD50 oral rat | > 2000 mg/kg |

Sodium fluoride (7681-49-4)

| LD50 oral rat | 52 mg/kg |
| LD50 dermal rat | 175 mg/kg |

Silica, amorphous, fumed, crystalline-free (112945-52-5)

| LD50 oral rat | 3160 mg/kg |
| ATE (oral) | 3160 mg/kg |

- Skin corrosion/irritation: Causes skin irritation.
- Serious eye damage/irritation: Causes serious eye irritation.
- Respiratory or skin sensitisation: May cause an allergic skin reaction.
- Germ cell mutagenicity: Not classified
- Carcinogenicity: Not classified

Sodium fluoride (7681-49-4)

| IARC group | 3 |
| National Toxicity Program (NTP) Status | 1 |

Silica, amorphous, fumed, crystalline-free (112945-52-5)

| IARC group | 3 |

- Reproductive toxicity: May damage fertility or the unborn child.
- Specific target organ toxicity (single exposure): Not classified
- Specific target organ toxicity (repeated exposure): Not classified
- Aspiration hazard: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Sodium fluoride (7681-49-4)

| LC50 fishes 1 | > 530 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus) |
| EC50 Daphnia 1 | 338 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| EC50 other aquatic organisms 1 | 272 mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata) |
| LC50 fish 2 | 830 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [semi-static]) |
| EC50 Daphnia 2 | 98 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| EC50 other aquatic organisms 2 | 850 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus [static]) |

12.2. Persistence and degradability

No additional information available
12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

In accordance with DOT / ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number
Not applicable

14.2. UN proper shipping name
Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethylene glycol dimethacrylate (109-16-0)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester (1565-94-2)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Chemical frits (65997-18-4)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>2-Propenoic acid, 2-methyl-, 1,6-hexanediyl ester (6606-59-3)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Silane, dichlorodimethyl-, reaction products with Silica (68611-44-9)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Sodium fluoride (7681-49-4)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis.[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- (41637-38-1)</td>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

15.2. US State regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium fluoride (7681-49-4)</td>
<td>U.S. - Massachusetts - Right To Know List</td>
</tr>
<tr>
<td></td>
<td>U.S. - New Jersey - Right to Know Hazardous Substance List</td>
</tr>
</tbody>
</table>
### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Acute Tox. 3 (Oral)</th>
<th>Acute toxicity (oral) Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 4 (Dermal)</td>
<td>Acute toxicity (dermal) Category 4</td>
</tr>
<tr>
<td>Acute Tox. 4 (Oral)</td>
<td>Acute toxicity (oral) Category 4</td>
</tr>
<tr>
<td>Aquatic Chronic 3</td>
<td>Hazardous to the aquatic environment - Chronic Hazard Category 3</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation Category 1</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Flam. Liq. 4</td>
<td>Flammable liquids Category 4</td>
</tr>
<tr>
<td>Repr. 1A</td>
<td>Reproductive toxicity Category 1A</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation Category 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>Skin Sens. 1</td>
<td>Skin sensitisation Category 1</td>
</tr>
<tr>
<td>Skin Sens. 1B</td>
<td>Skin sensitisation Category 1B</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity (single exposure) Category 3</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H317</td>
<td>May cause an allergic skin reaction</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H360</td>
<td>May damage fertility or the unborn child</td>
</tr>
<tr>
<td>H412</td>
<td>Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SDS US (GHS HazCom 2012)
1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>SDS Code Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynal® Powder</td>
<td>553005-Powder</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trade Name &amp; Synonyms</th>
<th>Date of Last Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynal® Tissue Conditioner and Temporary Reliner</td>
<td>01/17/11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENTSPLY/Caulk</td>
<td>38 West Clarke Avenue</td>
</tr>
<tr>
<td></td>
<td>Milford DE 19963-1805</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender or Minor Variant Identities</th>
<th>Information Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>(302) 422-4511 (8:00 AM - 4:30 PM Eastern Time)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Product Use for Canada</th>
<th>Emergency Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>(302) 422-4511 (8:00 AM - 4:30 PM Eastern Time)</td>
</tr>
</tbody>
</table>

2. Hazard(s) Identification

**Warning**

Causes eye irritation

Causes mild skin irritation

Wash hands thoroughly after handling.

If In Eyes: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

If skin irritation occurs: Get medical attention.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Component</th>
<th>CAS Number</th>
<th>Exposure Limits</th>
<th>%</th>
</tr>
</thead>
</table>
| Benzoyl Peroxide        | 94-36-0    | 5.0 mg/M³       | <= than 1%

**Warning:** Contains Aspartame. Practioner: Advise Phenylketonurics this product contains phenylalanine.

4. First Aid Measures

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>First Aid Instructions</th>
<th>Immediate Medical Attention</th>
<th>Delayed Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If symptoms persist consult physician.</td>
<td>Get medical aid.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Skin</td>
<td>Flush skin with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. Wash clothing before reuse.</td>
<td>Get medical aid if symptoms persist.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult give oxygen. Consult physician if symptoms persist.</td>
<td>Get medical aid.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Ingestion</td>
<td>If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting.</td>
<td>Get medical aid.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Other</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Note to Physicians (Treatment, Testing and Monitoring): Treat symptomatically.

5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Flashpoint Method:</th>
<th>Flamable (Explosive) Limits in Air</th>
<th>Autoignition Temperature (&gt;300°C (572°F))</th>
<th>Other: Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>304°C (572°F) Tag Closed Cup</td>
<td>20mg/M³ (as dust cloud)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flame Propagation or Burning Rate (for Solids)</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Properties Contributing to Fire Intensity: Not Applicable</th>
<th>Flammability Classification:</th>
<th>NFPA Flammability:</th>
<th></th>
</tr>
</thead>
</table>

| Extinguishing Media: Water spray, water foam, CO₂, or extinguishing powder. Fight larger fires with water spray or alcohol resistant foam. | Extinguishing Media to Avoid: Water with full jet. |

Protection and Procedures for Firefighters: Firefighters should wear self-contained respiratory protective devices. Formation of toxic, irritating gases is possible from the decomposition of the polymer.

Unusual Fire and Explosion Hazards: Dusts may be combustible when exposed to heat, flame, or oxidizing agents. Although the polymer dust is not easily ignited, the explosive limits of the polymer dust suspended in air are approximately those of coal dust therefore, fire fighters should avoid extinguishing methods which generate dust clouds. Formation of toxic, irritating gases is possible from the decomposition of the polymer. In routine use this product does not present an explosion hazard.

6. Accidental Release Measures

Containment Technique: Material is a solid and as such containment is limited to steps to reduce dust.

Spill: (for) Clean-up Procedures and Equipment: Wear protective clothing and scrape up bulk material and place in a labeled plastic or metal container.

Avoid direct skin contact to minimize the possibility of contact dermatitis to susceptible persons. Polymer particles are slippery when spilled on hard floor so be cautious when cleaning.

~Verified on 2014-09 by Henry Schein to be the most current version of the SDS. To be verified again on 2017-09. ~
7. Handling and Storage

Handling Practices and Warnings: Minimize dust generation when handling. Avoid inhalation of dust, and contact with eyes. Product is intended for dental use only. Handling of this product should be by trained healthcare professionals only. Observe normal care for working with chemicals.

Storage Practices and Warnings: Store in a cool, dry, well-ventilated area. Store only in the original package. Keep package tightly sealed. To prevent water absorption and contamination, store away from food and beverages.

8. Exposure Control / Personal Protection

<table>
<thead>
<tr>
<th>Routes of Entry</th>
<th>Personal Protective Equipment (PPE) for Normal Use</th>
<th>PPE for Emergencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/Face</td>
<td>Wear appropriate protective eyewear or safety glasses to prevent exposure during normal use.</td>
<td>For emergency or higher risk of exposure, wear chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.</td>
</tr>
<tr>
<td>Skin</td>
<td>During normal use, disposable gloves are recommended to prevent skin exposure.</td>
<td>For emergency or higher risk of exposure, wear protective gloves to prevent skin exposure and wear a lab coat to prevent contamination of your clothing. Wash contaminated clothing before reuse.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>During normal use with local exhaust, use of a dust mask will provide additional protection.</td>
<td>For emergency or higher risk of exposure, (for example when visible dust cloud is observed), follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Always use a N95 or European Standard EN149 approved respirator when necessary.</td>
</tr>
<tr>
<td>Body Protection</td>
<td>Protective work clothing Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

General Hygiene Considerations and Work Practices: When using polymer particulate material, use methods to minimize dust generation. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.

Protective Measures During Repair and Maintenance of Contaminated Equipment: Wear protective gloves and OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Always use a N95 or European Standard EN149 approved respirator to prevent inhalation of dust.

Other Protective Measures and Equipment: Facilities should be equipped with an eyewash station.

9. Physical and Chemical Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White free flowing powder.</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic methacrylate ester odor.</td>
</tr>
<tr>
<td>Normal Physical State</td>
<td>Dry powder (Polymer particles)</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.0 g/cm³</td>
</tr>
<tr>
<td>Solubility In Water</td>
<td>Not soluble</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Density (AR=1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate=1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Other Decomposition Temp*</td>
<td>200°C (392°F)</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Strong oxidizing agents, strong bases, amines and alkaline.

Hazardous Products Produced During Decomposition: Carbon monoxide, irritating gases and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: May Occur | May Not Occur

Stability: Stable | Unstable

Conditions to Avoid: None known

Conditions to Avoid: Excessive heat above 200°C (392°F), strong oxidants.

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Other Structure Activity Data: None known.

Product may be an irritant to the skin in susceptible persons. On the eye the product has an irritating effect. Certain susceptible persons may be sensitized or allergic to acrylates and methacrylates.

Emergency Overview: Free flowing powder is not known to cause significant health problems. Should be considered an irritant or nuisance dust. Avoid inhalation of dust. Keep dust out of eyes to prevent possible irritation.

<table>
<thead>
<tr>
<th>Routes of Exposure</th>
<th>Signs and Symptoms</th>
<th>Severity (Mild, Moderate, Severe)</th>
<th>Acute and Chronic Health Effect(s)</th>
<th>Target Organ(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Material can cause irritation and redness.</td>
<td>Single</td>
<td>Mild</td>
<td>Irritation and possible corneal damage.</td>
</tr>
<tr>
<td>Skin</td>
<td>Material may cause irritation.</td>
<td>Single &amp; Repeated</td>
<td>Irritation may become more pronounced after repeated exposure in some individuals</td>
<td>Mild</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Material may cause irritation.</td>
<td>Single &amp; Repeated</td>
<td>Irritation may become more pronounced after repeated exposure in some individuals</td>
<td>Not known to cause any health issues</td>
</tr>
</tbody>
</table>
12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statement: Material is a solid with low volatility and is insoluble in water. Material is expected to have low toxicity to organisms in the environment. It is not biodegradable. Material is not likely to be removed during biological treatment process.

13. Disposal Considerations

Regulations: May be disposed of in landfill or incinerated. Dispose of material as solid waste in a closed container. Dispose of in accordance with Federal, State and Local regulations.

Properties (Physical/Chemical) Affecting Disposal: Dry powder. Dispose of material as solid waste in a closed container.

14. Transport Information

Regulated for Shipping: No. Not Regulated

DOT Shipping Name: Not Regulated

DOT Hazard Class: Not Applicable

UN Number: Not Applicable

15. Regulatory Information

U.S. Federal Regulations: CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR Part 372): None.

Section 302 Extremely Hazardous Substances (EHS): None.

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.

U.S. State Regulations: California Proposition 65: This product does not contain any chemicals, which are on the California Proposition 65 list.

International Regulations: Canadian Environmental Protection Act: This product is a medical device and not subject to chemical notification requirements.

European Community Labeling: Not a dangerous preparation.

European Inventory of New and Existing Chemical Substances (EINECS): This product is a medical device and not subject to chemical notification requirements.

Other: Not Applicable

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, flaxseed, natural rubber, or natural latex.
All components are synthetically produced; none are derived from animal products.
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific products features and shall not establish a legally valid contractual relationship.
The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DPU.
DENTSPLY/International
DENTSPLY/Caulk
Safety Data Sheet

1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>SDS Code Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynal® Liquid</td>
<td>553005-Liquid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trade Name &amp; Synonyms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lynal® Tissue Conditioner and Temporary Retainer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date of Last Revision</th>
</tr>
</thead>
<tbody>
<tr>
<td>01/17/11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Manufacturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENTSPLY/Caulk</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>38 West Clarke Avenue</td>
</tr>
<tr>
<td>Milford DE 19963-1805</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Information Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>(302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emergency Telephone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>(302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)</td>
</tr>
</tbody>
</table>

2. Hazard(s) Identification

**Danger**

Highly Flammable Liquid and Vapour

- Keep away from heat/sparks/open flames / hot surfaces.
- No smoking.
- Keep container tightly closed.
- Wear protective gloves/eye protection/face protection.
- Ground / Bond container and receiving equipment.
- Use explosion-proof electrical lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- If ON SKIN or HAIR: Remove / take off immediately all contaminated clothing.
- Rinse skin with water / shower.
- In case of fire: Use CO₂ sand or extinguishing powder.

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>C.A.S. Number</th>
<th>Exposure Limits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>1000 ppm</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Triethyl citrate</td>
<td>77-93-0</td>
<td>Not Established</td>
<td>&gt; 90</td>
</tr>
</tbody>
</table>

Note: Flavor additive is artificial mint.

4. First Aid Measures

<table>
<thead>
<tr>
<th>Routes of Exposure</th>
<th>First Aid Instructions</th>
<th>Immediate Medical Attention</th>
<th>Delayed Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Rinse opened eye for several minutes under running water. If symptoms persist consult physician</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin</td>
<td>Immediately wash with soap and water and rinse thoroughly</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Inhalation</td>
<td>Supply fresh air</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Ingestion</td>
<td>If symptoms persist consult physician</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Other</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Note to Physicians (Treating, Testing and Monitoring): Treat symptomatically.

5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Flashpoint Method: 18°C (64°F) Penetration Closed Cup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable (Explosive) Limits in Air: LEL, Not Established; UEL, Not Established</td>
</tr>
<tr>
<td>Autoignition Temperature: Not Established</td>
</tr>
<tr>
<td>Other: Not Applicable</td>
</tr>
<tr>
<td>Flame Propagation or Burning Rate (for Solids): Not Applicable</td>
</tr>
<tr>
<td>Properties Contributing to Fire Intensity: Not Applicable</td>
</tr>
<tr>
<td>Flammability Classification: 3</td>
</tr>
</tbody>
</table>

6. Accidental Release Measures

Containment Techniques: Wear proper personal protective equipment as described in section 8. Absorb spill with inert material (e.g., vermiculite, sand, earth), then place material in suitable labeled plastic or metal container.

Spill/Leak Clean-up Procedures and Equipment: Absorb spill with inert material (e.g., vermiculite, sand, and earth), then place material in suitable labeled plastic or metal container. Ensure adequate ventilation.

Evacuation Procedures: Not Applicable

Special Instructions: Not Applicable

Reporting Requirements: Not Applicable

7. Handling and Storage

Handling Practices and Warnings: Wash thoroughly after handling. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals. Avoid ingestion and inhalation.

Storage Practices and Warnings: Store only in the original package. Keep package tightly sealed. Store away from extreme heat, food and beverages.

8. Exposure Control / Personal Protection

Ventilation: None required during normal extended use of this product.

Other Engineering Controls: Not Applicable

Routes of Entry: Personal Protective Equipment (PPE) for Normal Use

Eye/Face: Safety Glasses

Skin: The glove material has to be impermeable and resistant to the product.

Inhalation: Not Required for normal volumes used in dental office.

Body Protection: Protective work clothing

General Hygiene Considerations and Work Practices: Keep away from food stuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.

Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable

Other Protective Measures and Equipment: Not Applicable

9. Physical and Chemical Characteristics

Appearance: Clear liquid

Odor: Characteristic alcohol odor with mint.

Normal Physical State: Low Viscosity Liquid

Melting Point: Not Established

Boiling Point: 160°C (320°F)

Specific Gravity: 1.1 g/cm³

Solubility in Water: Partially

pH: Not Established

Vapor Pressure (over Hg): N. A.

Vapor Density (AIR = 1): Not Established

Evaporation Rate (Butyl Acetate = 1): Not Established

Other: Not Applicable

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): High temperatures, strong oxidizing agents and acetyl chloride.

Hazardous Products Produced During Decomposition: Carbon dioxide, and carbon monoxide from incomplete combustion.

Hazardous Polymerization: Yes May Occur

May Not Occur Conditions to Avoid: High Temperatures, ignition sources.

Stability? Stable

Unstable

Conditions to Avoid: High Temperatures, ignition sources.

11. Toxicological Information

Toxicity Data, Epidemiology Studies, Carcinogenicity, Neurological Effects, Genetic Effects, Reproductive Effects, or Structure Activity Data:

The plasticizer has an Oral LD₅₀ of 7932 mg/Kg.

Emergency Overview: Material may cause eye irritation. Breathing vapors may cause drowsiness and dizziness.

Routes of Exposure: Signs and Symptoms

Single, Repeated, or Lifetime Exposure Severity (Mild, Moderate, Severe) Acute and Chronic Health Effect(s) Target Organ(s)

Eye Material causes severe eye irritation. Single Moderate Irritation and possible corneal damage Yes

Skin Material may be an irritant and may be absorbed through the skin. Single & Repeated Moderate Irritation or possible allergic response Yes

Inhalation Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Repeated Moderate Chronic inhalation may cause effects similar to those of acute inhalation. Causes respiratory tract irritation. May cause motor incoordination and speech abnormalities. Yes
<table>
<thead>
<tr>
<th>Ingestion</th>
<th>May cause irritation of the digestive tract.</th>
<th>Single &amp; Repeated</th>
<th>Mild</th>
<th>Not Applicable</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Central nervous system</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Medical Conditions Aggravated by Exposure: Open sores and wounds of the skin. Individuals with known sensitivity to methacrylate, or urethane dimethacrylate resin used in dental restorative products.

Carcinogenicity: NTP: Not listed. IARC monographs: Not listed. OSHA regulated: No. All components of this product are in compliance with the inventory listing requirements of the U.S. Toxics Substances Control Act (TSCA) Chemical Substance Inventory.

Potential Environmental Effects: Do not allow to enter sewers/surface or ground water.

NFPA Hazard Classification Ratings: (Scale 0-4) Health = 1, Fire = 3, Reactivity = 1, Specific Hazard = None

12. Ecological Information

Toxicity Data: Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statement: Water Hazard Class = 2 (Self-assessment). The ethyl alcohol in the product is apt to volatilize, break into the ground water, but no data on the rates of these processes can be found. Its fate in ground water is unknown. When released into water it will volatilize and probably degrade. It would not be expected to adsorb to sediment or bioconcentrate in fish. When released to the atmosphere it will photodegrade in hours to an estimated range of 4 – 6 days in less polluted areas.

13. Disposal Considerations

Regulations: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of material as solid waste in a closed container. Dispose of in accordance with Federal, State and Local regulations.


14. Transport Information

Regulated for Shipping: Yes. Proper Shipping Name: Ethyl Alcohol Solution. Packing Group: II.

Do Changes in Quantities, packaging, or shipment method change product classification? No.

Hazard Class: 3. UN Identification Number: 1170

15. Regulatory Information

U.S. Federal Regulations: CERCLA 103 Reportable Quantity: No chemicals have a reportable quantity. Report spills required under federal, state and local regulations. Many states have more stringent release reporting requirements.


Section 313: Toxic Chemicals: This product does not contain any chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372).

SARA Codes: CAS # 64-17-5 Ethyl Alcohol: immediate, delayed, fire.

Section 302: Extremely Hazardous Substances (EHS): None.

EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA Inventory.

U.S. State Regulations: California Proposition 65: This product does not contain any chemicals which are on the California Proposition 65 list.

Clean Water Act: CAS # 64-17-5 Ethyl Alcohol: not listed as a hazardous air pollutant (HAP). This material does not contain any Class I ozone depletors. This material does not contain any Class II depletors.

Clean Water Act: CAS # 64-17-5 Ethyl Alcohol: not listed as a Hazardous Substance under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

WATER (Water Danger Protection): CAS # 64-17-5 Ethyl Alcohol: 0

International Regulations: Hazard Symbol: Flammable NF Fire Risk Phrases: R11 Highly Flammable, R350/2/2 Harmful by inhalation, in contact with skin and if swallowed. R36/37/38 Irritating to eyes, respiratory system. R68 Possible risk of irreversible effects. Safety Phrases: S2 Keep container tightly closed and in a well ventilated place. S16 Keep away from sources of ignition – No Smoking. S23 Do not breathe fumes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37 Wear suitable protective clothing and gloves. S60 This material and its container must be disposed of as hazardous waste.

Canada WHMIS for the CAS # 64-17-5 Ethyl Alcohol, classification of B2 D2A, Flammable Liquid is on the Canadian Ingredient Disclosure List.

16. Other Information

To the best of our knowledge this product does not contain gluten, wheat protein, flaxseed, natural rubber, or natural latex.

All components are synthetically produced, none are derived from animal products.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DSD.
DENTSPLY/International
DENTSPLY/Caulk
Safety Data Sheet

1. Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>SDS Code Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyenal® Separator</td>
<td>553005-Separator</td>
</tr>
<tr>
<td>Trade Name &amp; Synonyms</td>
<td>Date of Last Revision</td>
</tr>
<tr>
<td>Lyenal® Tissue Conditioner and Temporary Reliner</td>
<td>01/17/11</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>Address</td>
</tr>
<tr>
<td>DENTSPLY/Caulk</td>
<td>38 West Clarke Avenue</td>
</tr>
<tr>
<td></td>
<td>Milford DE 19963-1805</td>
</tr>
<tr>
<td>Grades or Minor Variant Identities</td>
<td>Information Telephone Number</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>(302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)</td>
</tr>
<tr>
<td>Product Use (for Canada)</td>
<td>Emergency Telephone Number</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>(302) 422-4511 (8:00 AM – 4:30 PM Eastern Time)</td>
</tr>
</tbody>
</table>

2. Hazard(s) Identification

N/A - Not Applicable

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Component</th>
<th>C.A.S. Number</th>
<th>Exposure Limits</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Oil</td>
<td>8042-47-5</td>
<td>5 mg/M³ (for oil mist)</td>
<td>100</td>
</tr>
</tbody>
</table>

4. First Aid Measures

<table>
<thead>
<tr>
<th>Routes of Exposure</th>
<th>First Aid Instructions</th>
<th>Immediate Medical Attention</th>
<th>Delayed Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist consult physician.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin</td>
<td>First aid is not normally required. However it is a good practice to wash any chemical from the skin.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Inhalation</td>
<td>First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air. Seek immediate medical attention.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Ingestion</td>
<td>First aid is not normally required. However, if swallowed and symptoms develop, seek medical attention.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Other</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Note to Physician (Treating, Testing and Monitoring): Treat symptomatically.

5. Fire and Explosion Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashpoint Method</td>
<td>&gt;187.3°C (370°F)</td>
</tr>
<tr>
<td>Flammable ( Explosive) Limits in Air</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>LEL: Not Applicable, UEL: Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Autogenous Temperature</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Other</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammability Classification</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammability/Explosion Risk Data:</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>Flame Propagation or Burning Rate</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>(for Solids)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Properties Contributing to Fire Intensity</td>
<td>Non-flammable</td>
</tr>
<tr>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Extinguishing Media</td>
<td>Water</td>
</tr>
<tr>
<td>Dry chemical, CO₂, foam or water spray is recommended. Water or foams may cause frothing of materials heated above 212°F (100°C). Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.</td>
<td></td>
</tr>
<tr>
<td>Extinguishing Media to Avoid</td>
<td>Water with full jet.</td>
</tr>
<tr>
<td>Protection and Procedures for Firefighters:</td>
<td>Firefighters should use self-contained respiratory protective devices.</td>
</tr>
<tr>
<td>Unusual Fire and Explosion Hazards:</td>
<td>This material may burn, but will not ignite readily. Vapors are heavier than air and can accumulate in low areas. If container is not properly cooled, it can rupture in the heat of a fire.</td>
</tr>
</tbody>
</table>

6. Accidental Release Measures

| Containment Techniques: | This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. |
| Leak Clean-up Procedures and Equipment: | Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways. Do not flush spill for later recovery or disposal. Spilled material may be absorbed into appropriate absorbent material. |
| Evacuation Procedures: | Not Applicable |
| Special Instructions: | Not Applicable |
| Reporting Requirements: | Not Applicable |

7. Handling and Storage

Handling Practices and Warnings: Product is intended for dental use only. Handling of this product should be by trained dental healthcare professionals only. Observe normal care for working with chemicals. Keep away from all ignition sources.

Storage Practices and Warnings: Store only in the original package. Keep package tightly sealed. Store in a cool, dry, well-ventilated area away from heat and all sources of ignition. Store away from food and beverages.

8. Exposure Control / Personal Protection
Ventilation: None required during normal intended use of this product | Other Engineering Controls: Not Applicable

Routes of Entry | Personal Protective Equipment (PPE) for Normal Use | PPE for Emergencies
--- | --- | ---
Eye / Face | Safety Glasses | Not Applicable
Skin | The glove material has to be impermeable and resistant to the product. | Not Applicable
Inhalation | Not Required | Not Applicable
Body Protection | Protective work clothing | Not Applicable

General Hygiene Considerations and Work Practices: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at end of work. Avoid contact with the eyes and skin.

Protective Measures During Repair and Maintenance of Contaminated Equipment: Not Applicable

Other Protective Measures and Equipment: Not Applicable

9. Physical and Chemical Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Normal Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.88 g/cm³</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Not soluble</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>310°C (568°F)</td>
</tr>
<tr>
<td>pH</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg)</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>&gt;1</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Other</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

10. Stability and Reactivity Data

Incompatibility (Materials to Avoid): Strong oxidizing agents.

Hazardous Products Produced During Decomposition: Carbon, nitrogen and sulfur oxides.

Hazardous Polymersization: May Occur | May Not Occur | Conditions to Avoid: None known.

Stability: Stable | Instable | Conditions to Avoid: Avoid all possible sources of ignition.

11. Toxicological Information

Emergency Overview: No significant hazards for emergency responses are known.

<table>
<thead>
<tr>
<th>Route of Exposure</th>
<th>Signs and Symptoms</th>
<th>Single, Repeated, or Lifetime Exposure</th>
<th>Severity (Mild, Moderate, Severe)</th>
<th>Acute and Chronic Health Effect(s)</th>
<th>Target Organ(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye</td>
<td>Not known to be an eye irritant.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin</td>
<td>Not known to be a skin irritant. No harmful effects from skin absorption have been reported.</td>
<td>Repeated</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Inhalation</td>
<td>No harmful effects reported.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No harmful effects reported.</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Other</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

Medical Conditions Aggravated by Exposure: Open sores and wounds of the skin.

Carcinogenicity: NTP: Not listed | IARC: Monograph: Not listed | OSHA: Not regulated | No All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

Potential Environmental Effects: Do not allow to enter sewers/pipelines or ground water.

NFPA Hazard Classification Ratings: (Scale 0-4), Health = 0, Fire = 1, Reactivity = 0

12. Ecological Information

Toxicity Data, Environmental Fate, Physical/Chemical Data, or other Data Supporting Environmental Hazard Statements: Water hazard class 1 (Self-assessment): slightly hazardous for water.

13. Disposal Considerations

Regulations: Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Dispose of in accordance with Federal, State and Local regulations.

Properties (Physical/Chemical) Affecting Disposal: Dispose of material as solid waste in a closed container.

14. Transport Information

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulated for Shipping</td>
<td>No</td>
</tr>
<tr>
<td>DOT Hazard Class</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>UN Number</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

15. Regulatory Information

U.S. Federal Regulations: CERCLA, TSCA. This product is not subject to CERCLA reporting requirements. Many states have more stringent chemical reporting requirements. Report spills required under federal, state and local regulations.

Section 313 Toxics Release Inventory: This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section...
16. Other Information

To the best of our knowledge this product does not contain gluten, wheat grains, linseed, natural rubber, or natural latex.

All components are synthetically produced; none are derived from animal products.

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product feature and shall not establish a legally valid contractual relationship.

The attached safety data sheet covers the dangers and measures to be taken when large quantities of material are released, for example due to accidents during transport or storage by the dealer. For quantities of material typically used in clinical practice, information necessary for safe use and storage of the product is given in the DPU.

---Verified on 2014-09 by Henry Schein to be the most current version of the SDS. To be verified again on 2017-09.---
SAFETY DATA SHEET

SECTION 1. Identification

PRODUCT NAME:  Henry Schein Sun-Schein Light-Cure Composite Restorative Kit

COMMON OR CHEMICAL NAME:  Light-Cure Composite Restorative Kit

RECOMMENDED USE:  Dental Material

MANUFACTURED BY:  Scientific Pharmaceuticals, Inc.
3221 Producer Way
Pomona, California  91768
USA

EMERGENCY TELEPHONE:  800-634-3047

GENERAL INFORMATION:

SECTION 2. Hazards Identification

Hazard Classification:  For potential health hazards: SEE Section 11 below.

No other significant hazards to man or the environment are reasonably foreseen.

SECTION 3. Composition/Information on Ingredients

Chemical Name/Common Name:  Light-Cure Composite Restorative Kit

Product Contents:  • 5g x4 Light-Cure Composite Restorative Syringes
• 7g Enamel Conditioner Bottle
• 6g Bonding Agent Bottle

Hazardous Ingredients:  • Light-Cure Composite Restorative:  None listed
• Enamel Conditioner contains:  Phosphoric Acid (see below)
• Bonding Agent:  None listed

Phosphoric Acid, Solution
Proper Shipping Name:  Phosphoric Acid
CAS:  7664-38-2
UN Designation:  UN1805
Class:  8, Corrosive
Packing Group:  III

HAZARDOUS DATA
Health:  2
Flammability:  0
Reactivity:  2

Hazardous Data Legend
4 - Extreme
3 - High
2 - Moderate
1 - Slight
0 - Insignificant

Formulation Represents A Trade Secret Mixture

SECTION 4. First Aid Measures

Inhalation:  No harm anticipated from materials in quantities as packaged.

Skin Contact:  • Light-Cure Composite Restorative:  Wash with soap and water.
• Enamel Conditioner:  Rinse with water. Prolonged contact may destroy tissue. Seek medical attention in case of serious irritation or burns.
• Bonding Agent:  Wash with soap and water.
SECTION 4. First Aid Measures - continued

Eye Contact:
- **Light-Cure Composite Restorative**: Flush with copious amounts of water.
- **Enamel Conditioner**: Immediately rinse with copious amounts of water. Seek medical attention as soon as possible.
- **Bonding Agent**: Flush with copious amounts of water.

Ingestion:
- **Light-Cure Composite Restorative**: Induce vomiting if large amount of material is swallowed.
- **Enamel Conditioner**: Corrosive to mouth and throat – Do not induce vomiting. Serve milk if available or sodium bicarbonate (baking soda).
- **Bonding Agent**: Induce vomiting if large amount of material is swallowed.

SECTION 5. Fire-Fighting Measures

Suitable Extinguishing Media: Water contact acceptable.

Extinguishing Media which should not be used: None.

Special exposure hazards from combustion products: None for any component in quantities as packaged.

Special protective equipment for fire fighters: None.

SECTION 6. Accidental Release Measures

Personal Precautions and Emergency Procedures:
Avoid contact of skin or eyes with any component. Wash hands with soap and water if contact occurs.

Environmental Precautions and Methods for Containment:
- **Light-Cure Composite Restorative**: Dispose of in accordance to all federal, state, local regulations.
- **Enamel Conditioner**: Dispose in DOT approved waste containers.
- **Bonding Agent**: Dispose of in accordance to all federal, state, and local regulations.

Methods for Cleaning Up:
- **Light-Cure Composite Restorative**: Wipe up with soap, water and paper towels.
- **Enamel Conditioner**: Dilute with large amounts of water and dispose.
- **Bonding Agent**: Wipe up with soap, water and paper towels.

SECTION 7. Handling and Storage

Handling Precautions:
- **Light-Cure Composite Restorative**: None.
- **Enamel Conditioner**: Avoid proximity of reactive metals and alkaline substances.
- **Bonding Agent**: None.

Safe Storage Conditions: Store kit at temperatures not exceeding 75°F (24°C).

Other Restrictions or Recommendations:
- **Light-Cure Composite Restorative**: Avoid exposure to moisture and light.
- **Enamel Conditioner**: None.
- **Bonding Agent**: Avoid exposure to moisture and light.

SECTION 8. Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits: Not established.

Respiratory Protection & Ventilation: Not required for any component.

Protective Clothing or Equipment: Not required for any component under normal handling.
SECTION 8. Exposure Controls/Personal Protection - Continued

Unusual Work/Hygienic Practices: Avoid prolonged contact skin; wash with soap and water.

SECTION 9. Physical and Chemical Properties

Appearance (physical state, color, etc.):
- Enamel Conditioner: Thin gel, green.
- Bonding Agent: Clear liquid.

Odor:
- Light-Cure Composite Restorative: Negligible odor.
- Enamel Conditioner: Negligible odor.
- Bonding Agent: Slight acrylic odor.

Odor threshold: Not established.

pH:
- Light-Cure Composite Restorative: Not applicable.
- Enamel Conditioner: ~ 1
- Bonding Agent: N/A

Melting point/freezing point: All components: Not applicable.

Initial boiling point and boiling range:
- Light-Cure Composite Restorative: Not Applicable.
- Bonding Agent: Not established.

Flash point: All components: Not Applicable.

Evaporating rate: Not established.

Flammability (solid, gas): All components: No.

Upper/Lower flammability or explosive limits: All components: Not Applicable.

Vapor pressure:
- Light-Cure Composite Restorative: Negligible at room temperatures.
- Enamel Conditioner: <760 mm Hg at 100°C
- Bonding Agent: Negligible at room temperatures.

Vapor density:
- Light-Cure Composite Restorative: Not applicable.
- Enamel Conditioner: <1
- Bonding Agent: >1

Relative density:
- Light-Cure Composite Restorative: ~ 2.8
- Enamel Conditioner: ~ 1.2
- Bonding Agent: ~ 1.0

Solubility (ies):
- Light-Cure Composite Restorative: Virtually insoluble in water.
- Enamel Conditioner: Soluble in water.
- Bonding Agent: Insoluble in water.

Partition coefficient: n-octanol/water: Not established.

Auto-ignition temperature: All components: Not Applicable.

Decomposition temperature: Not established.

Viscosity: Not established.
SECTION 10. Stability and Reactivity

Stability: All components: Generally stable.

SECTION 10. Stability and Reactivity - continued

Conditions of Instability: 
- Light-Cure Composite Restorative: Avoid exposure to light.
- Enamel Conditioner: None.
- Bonding Agent: Avoid exposure to light.

Incompatibility or Reactivity with Various Substances: 
- Light-Cure Composite Restorative: None.
- Enamel Conditioner: Reactive metals, alkaline substances.
- Bonding Agent: None.

Hazardous Decomposition Products: 
- Light-Cure Composite Restorative: None.
- Enamel Conditioner: Phosphoric acid vapors and phosphoric oxides, if exposed to extreme heat.
- Bonding Agent: None.

Hazardous Polymerization: 
- Light-Cure Composite Restorative: None in quantities as packaged.
- Enamel Conditioner: None in quantities as packaged.
- Bonding Agent: None in quantities as packaged.

Conditions to Avoid: Avoid exposure to light and temperatures above 80°F.

SECTION 11. Toxicological Information

Potential Acute Health Effects: 
- Light-Cure Composite Restorative: Possibility of skin irritation or sensitization if not washed off promptly.
- Enamel Conditioner: Eye irritation upon contact. Skin irritation upon prolonged exposure.
- Bonding Agent: Possibility of skin irritation or sensitization if not washed off promptly.

Potential Chronic Health Effects: 
- Light-Cure Composite Restorative: Possibility of skin sensitization or irritation upon prolonged or repeated exposure.
- Enamel Conditioner: Possibility of severe skin/eye damage upon prolonged or repeated exposure.
- Bonding Agent: Possibility of skin sensitization or irritation upon prolonged or repeated exposure.

Signs and Symptoms of Exposure: Skin/eye irritation.

Medical Conditions Generally Aggravated by Exposure: None known.

Carcinogenic or Potential Carcinogenic Effects: No ingredient listed as a carcinogen.

Other Potential Health Effects: None known.

SECTION 12. Ecological Information

No ecological damage or impact anticipated upon exposure of any component to environment in quantities as packaged.

SECTION 13. Disposal Considerations

Waste Disposal: Do not dispose any components into sink. Dispose of in accordance with all federal, state, and local regulations.

SECTION 14. Transport Information

UN Classification: Not applicable.

Identification: Not applicable.

Special Provisions for Transport: Avoid elevated temperatures and high intensity light.
SECTION 15. Regulatory Information

U.S. FDA Dental Device: Class II product  
EC Medical Device Directive: Class IIa product

SECTION 16. Other Information

Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product itself. The information in this SDS was obtained from sources that we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or method of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. If the product is used as a component in another product or used in a way other than recommended by the Company, this SDS information may not be applicable.

SDS Approved by: David V. Butler, Technical Director
SAFETY DATA SHEET

Issuing Date: 27-May-2015       Revision Date: 08-May-2015

This safety data sheet was developed based on regulations applicable to an industrial/occupational setting and may be applicable to Distribution personnel. This safety data sheet does not address consumer use; for any information relevant to consumer use or retail handling refer to the package label.

1. IDENTIFICATION

Product Name  Fixodent Denture Powder Extra Hold
Product ID: 15887812_RET_NG
Recommended Use Health and Beauty Adhesives Oral hygiene
Manufacturer The Procter & Gamble Company
Mason Business Center
8700 Mason-Montgomery Road
Mason, OH 45040-9462
+1 513 622-1000
Procter & Gamble Inc.
P.O. Box 355, Station A
Toronto, ON M5W 1C5
1-800-465-2945

E-mail Address pgsds.im@pg.com
Emergency Telephone Transportation (24 HR)
CHEMTREC - 1-800-424-9300
(U.S / Canada) or 1-703-527-3887
Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

This is a personal care product that is safe for consumers and other users under normal and reasonably foreseeable use. This safety data sheet was developed based on regulations applicable to bulk substances in an industrial/occupational setting.

For Consumer - Ingredients in this product are not deemed to be hazardous when the product is used as intended.
For Manufacturing site personnel as follows:

This product is classified under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:

Eye Damage / Irritation Category 2B
Signal Word WARNING

Hazard Statements Causes eye irritation
Hazard pictograms None
Precautionary Statements - Prevention Wash hands thoroughly after handling
Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention

Precautionary Statements - Storage
None

Precautionary Statements - Disposal
None

Hazards not otherwise classified (HNOC)
None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Synonyms</th>
<th>Trade Secret</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, fumed, cryst-free</td>
<td>-</td>
<td>No</td>
<td>112945-52-5</td>
<td>0.5 - 1.5</td>
</tr>
<tr>
<td>Mentha Piperita Oil</td>
<td>-</td>
<td>No</td>
<td>8006-90-4</td>
<td>0.1 - 1.0</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact
None under normal use.

Ingestion
Call a physician or poison control center immediately if overdosed.

Inhalation
None under normal use.

Most important symptoms/effects, acute and delayed
May cause eye irritation.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
None.

Special hazard
None known.

Special protective equipment for fire-fighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical
None.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

None under normal use conditions.

Advice for emergency responders

Use personal protective equipment as required.

Environmental precautions

Household:
Product is safe to dispose of in household garbage or down the drain.

Non-household:
Do not discharge product into natural waters without pre-treatment or adequate dilution

Methods and materials for containment and cleaning up

Methods for containment

No information available.

Methods for cleaning up

No information available.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products
None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, fumed,</td>
<td>112945-52-5</td>
<td></td>
<td>(vacated) TWA: 6 mg/m³</td>
</tr>
<tr>
<td>cryst-free</td>
<td></td>
<td></td>
<td>&lt;1% Crystalline silica</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA: 20 mppcf</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(80)(% SiO2) mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>TWA</td>
</tr>
</tbody>
</table>

No relevant exposure guidelines for other ingredients

Exposure controls

This safety data sheet was developed based on regulations applicable to bulk substances in an industrial/occupational setting. For Consumers and Retail personnel - follow product label directions and warnings when using and/or handling this product. For Distribution and Manufacturing sites - follow the procedure as listed according to your Workplace Safety protocols.

Engineering Measures

No information available

Personal Protective Equipment

Eye Protection

Manufacturing Sites:
Safety glasses with side-shields
Distribution, Workplace and Household Settings:
No special protective equipment required
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State @20°C</td>
<td>solid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>white powder</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mint-like</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>pH value</td>
<td>5.0 - 7.0</td>
<td></td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling point/bolling range</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>Not Applicable</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>slightly soluble</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>slightly soluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Viscosity of Product</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>Products comply with US state and federal regulations for VOC content in consumer products.</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.
Stability Stable under normal conditions.
Hazardous polymerization Hazardous polymerization does not occur.
Hazardous Reactions None under normal processing.
Conditions to Avoid None under normal processing.
Materials to Avoid None in particular.
Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information
Information on likely routes of exposure

- Inhalation: No known effect.
- Skin contact: No known effect.
- Ingestion: No known effect.
- Eye contact: Avoid contact with eyes. Irritating to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure
12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment. The product is not expected to be hazardous to waste water treatment processes.

Persistence and degradability  No information available.
Bioaccumulative potential  No information available.
Mobility  No information available.
Other adverse effects  No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products  Non-household: Product is safe to dispose of in household garbage or down the drain. The product is not expected to be hazardous to waste water treatment processes.
Contaminated packaging  Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Codes (non-household setting)  331

14. TRANSPORT INFORMATION

DOT  Not regulated
IMDG  Not regulated
IATA  Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372
CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Food and Drug Administration (FDA)
The product described in this Material Safety Data Sheet is regulated under the Federal Food, Drug, and Cosmetics Act and is safe to use as per directions on container, box or accompanying literature (where applicable).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

California Proposition 65
This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>New Jersey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, fumed, cryst.-free</td>
<td>112945-52-5</td>
<td>X</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, amorphous, fumed, cryst.-free</td>
<td>112945-52-5</td>
<td>X</td>
</tr>
</tbody>
</table>

International Inventories

United States
All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada
This product is in compliance with CEPA for import by P&G.

Legend
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 27-May-2015
Revision Date: 08-May-2015
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
End of SDS
1. IDENTIFICATION

Product Identifier
Product Name C&B Metabond Base

Other means of identification
SDS # S398
UN/ID No UN1247

Recommended use of the chemical and restrictions on use.
Recommended Use Dental Adhesive System.

Details of the supplier of the safety data sheet
Supplier Address Parkell, Inc.
300 Executive Drive
Edgewood, NY 11717

Emergency Telephone Number
Company Phone Number (631) 249-1134
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Colorless, transparent liquid
Physical State Liquid

Classification

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Flammable Liquids</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Hazards Not Otherwise Classified (HNOC)
May be harmful in contact with skin
May be harmful if inhaled

Signal Word
Danger

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May cause respiratory irritation
Highly flammable liquid and vapor
Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Get medical attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Get medical advice / attention
IN CASE OF FIRE: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Other Hazards
Harmful to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>80-62-6</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>

*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.*
4. FIRST-AID MEASURES

First Aid Measures

**Eye Contact**
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.

**Skin Contact**
Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention.

**Inhalation**
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion**
Do not induce vomiting without medical advice. Immediately call a poison center or doctor/physician.

**Most important symptoms and effects**

**Symptoms**
Causes serious eye irritation and skin irritation. May cause an allergic skin reaction. Ingestion may cause headache, dizziness, nausea, tinnitus, dyspnea, etc. Inhalation can cause irritation of the upper respiratory tract and mucous membranes; at high concentrations, can cause symptoms similar to those which may be experienced upon ingestion.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician**
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Foam. Water. Carbon dioxide (CO2).

**Unsuitable Extinguishing Media**
Not determined.

**Specific Hazards Arising from the Chemical**
Highly flammable liquid and vapor. When exposed to flame, product emits toxic fumes and gases.

**Hazardous Combustion Products**
Carbon monoxide.

**Sensitivity to Static Discharge**
Take precautionary measures against static discharge.

**Protective equipment and precautions for firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions**
Use personal protection recommended in Section 8.

**For Emergency Responders**
Remove all sources of ignition. Ventilate the area.

**Environmental Precautions**
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.
Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up
Absorb small quantities on paper towels. Evaporate in safe place such as a fume hood. Allow sufficient time for evaporating vapors to completely clear the hood duct work. Burn the paper in a suitable location away from combustible materials. Large quantities can be collected and burned in a suitable combustion chamber.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling
Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Use only outdoors or in a well-ventilated area. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion proof equipment. Use only non-sparking tools. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed and store in a cool, dry and well-ventilated place. Do not store under pure nitrogen or sparge with nitrogen or oxygen-free gas. Store locked up.

Incompatible Materials
Polymerization catalysts such as peroxides, persulfates, light, heat, nitric acid and other strong oxidizers, ammonia and amines, and halogens and halogen compounds.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>STEL: 100 ppm, TWA: 50 ppm</td>
<td>TWA: 100 ppm, TWA: 410 mg/m³ (vacated) TWA: 100 ppm, TWA: 410 mg/m³ (vacated)</td>
<td>IDLH: 1000 ppm, TWA: 100 ppm, TWA: 410 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Safety glasses or full face shield.

Skin and Body Protection
Rubber or PVC gloves.

Respiratory Protection
NIOSH-approved respiratory protection for organic gases if needed.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless, transparent</td>
<td>Odor Not determined</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless, transparent</td>
<td>Odor Threshold Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>101 °C / 214 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>10 °C / 50 °F</td>
<td>Tag Closed Cup</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>8.2%</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>1.7%</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>40 mm HG</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>3.45</td>
<td>(Air=1)</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.944</td>
<td>(Water = 1)</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization may occur, especially when heated or catalyzed.

Conditions to Avoid

Incompatible Materials
Polymerization catalysts such as peroxides, persulfates, light, heat, nitric acid and other strong oxidizers, ammonia and amines, and halogens and halogen compounds.

Hazardous Decomposition Products
Thermal-oxidative degradation can produce toxic and corrosive materials, including carbon monoxide.
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact  Causes serious eye irritation.

Skin Contact  Causes skin irritation. May cause an allergic skin reaction. May be harmful in contact with skin.

Inhalation  May cause respiratory irritation. May be harmful if inhaled.

Ingestion  Do not ingest.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate 80-62-6</td>
<td>= 7872 mg/kg (Rat)</td>
<td>&gt; 5 g/kg (Rabbit)</td>
<td>= 4632 ppm (Rat) 4 h = 400 ppm (Rat) 1 h</td>
</tr>
</tbody>
</table>

Information on physical, chemical and toxicological effects

Symptoms  Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization  May cause an allergic skin reaction.

Carcinogenicity  Group 3 IARC components are "not classifiable as human carcinogens".

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate 80-62-6</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend

IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

STOT - single exposure  May cause respiratory irritation.

Numerical measures of toxicity

Not determined
12. ECOLOGICAL INFORMATION

Ecotoxicity
Harmful to aquatic life with long lasting effects.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate 80-62-6</td>
<td>170: 96 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>243 - 275: 96 h Pimephales promelas mg/L LC50 flow-through 125.5 - 190.7: 96 h Pimephales promelas mg/L LC50 static 170 - 206: 96 h Lepomis macrochirus mg/L LC50 flow-through 153.9 - 341.8: 96 h Lepomis macrochirus mg/L LC50 static 79: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 79: 96 h Oncorhynchus mykiss mg/L LC50 static 326.4 - 426.9: 96 h Poecilia reticulata mg/L LC50 static</td>
<td>69: 48 h Daphnia magna mg/L EC50</td>
<td></td>
</tr>
</tbody>
</table>

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate 80-62-6</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA Waste Number

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>RCRA</th>
<th>RCRA - Basis for Listing</th>
<th>RCRA - D Series Wastes</th>
<th>RCRA - U Series Wastes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate 80-62-6</td>
<td>U162</td>
<td>Included in waste stream:</td>
<td>F039</td>
<td>U162</td>
</tr>
</tbody>
</table>

California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate 80-62-6</td>
<td>Toxic Ignitable</td>
</tr>
</tbody>
</table>
14. TRANSPORT INFORMATION

**Note**
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**
- **UN/ID No**: UN1247
- **Proper Shipping Name**: Methyl methacrylate monomer, stabilized
- **Hazard Class**: 3
- **Packing Group**: III

**IATA**
- **UN/ID No**: UN1247
- **Proper Shipping Name**: Methyl methacrylate monomer, stabilized
- **Hazard Class**: 3
- **Packing Group**: III

**IMDG**
- **UN/ID No**: UN1247
- **Proper Shipping Name**: Methyl methacrylate monomer, stabilized
- **Hazard Class**: 3
- **Packing Group**: III

**Marine Pollutant**
This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

**International Inventories**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>Present</td>
<td>X</td>
<td>Proprietary</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**
- **TSCA**: United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL**: Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS**: European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS**: Japan Existing and New Chemical Substances
- **IECSC**: China Inventory of Existing Chemical Substances
- **KECL**: Korean Existing and Evaluated Chemical Substances
- **PICCS**: Philippines Inventory of Chemicals and Chemical Substances
- **AICS**: Australian Inventory of Chemical Substances

**US Federal Regulations**

**CERCLA**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>1000 lb</td>
<td></td>
<td>RQ 1000 lb final RQ</td>
</tr>
</tbody>
</table>

**SARA 313**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate - 80-62-6</td>
<td>80-62-6</td>
<td>Proprietary</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**CWA (Clean Water Act)**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl methacrylate</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td></td>
<td>3</td>
<td>2</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Issue Date: 23-Apr-2013
Revision Date: 13-Jan-2015
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet
1. IDENTIFICATION

Product Identifier
Product Name C&B Metabond Dentin Activator

Other means of identification
SDS # S394/S393
UN/ID No UN2582

Recommended use of the chemical and restrictions on use
Recommended Use Dental Adhesive System.

Details of the supplier of the safety data sheet
Supplier Address Parkell, Inc.
300 Executive Drive
Edgewood, NY 11717

Emergency Telephone Number
Company Phone Number (631) 249-1134
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Green-yellow, thick liquid
Physical State Liquid

Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>1 Sub-category C</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>1</td>
</tr>
<tr>
<td>Flammable Liquids</td>
<td>3</td>
</tr>
</tbody>
</table>

Hazards Not Otherwise Classified (HNOC)
May be harmful if swallowed

Signal Word
danger

Hazard Statements
Causes severe skin burns and eye damage
Flammable liquid and vapor
Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof equipment
Use only non-sparking tools
Take precautionary measures against static discharge

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation persists: Get medical advice/attention
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a poison center or doctor/physician
IF SWALLOWED: Call a poison center or doctor/physician
Rinse mouth
Do not induce vomiting
IN CASE OF FIRE: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid</td>
<td>77-92-9</td>
<td>Proprietary</td>
</tr>
<tr>
<td>Iron(III) Chloride, Ferric Chloride</td>
<td>7705-08-0</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>

*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.*

4. FIRST-AID MEASURES

First Aid Measures

**Eye Contact**
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

**Skin Contact**
Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If irritation persists, seek medical attention.

**Inhalation**
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Immediately call a poison center or doctor/physician.

**Ingestion**
Do not induce vomiting. If substantial quantities are ingested, give person 2 or 3 glasses of milk or water to drink. Get medical attention.
Most important symptoms and effects

Symptoms
Causes severe skin burns and eye damage. Inhalation is not a hazard unless misted or heated at high temperature. Mist inhalation may cause coughing or sneezing. May be irritating to the mouth, throat and stomach.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical.

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
Flammable liquid and vapor. When exposed to flame, product emits toxic fumes and gases.

Sensitivity to Static Discharge
Take precautionary measures against static discharge.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Use personal protection recommended in Section 8.

Environmental Precautions
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up
For small spills and residues, absorb with paper towels. Pick up and place in polyolefin bottle for disposal. Flush spill area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling
Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion proof equipment. Use only non-sparking tools. Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed and store in a cool, dry and well-ventilated place. Store away from direct sunlight. Store locked up.

Incompatible Materials
Bases. Strong alkalis.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid 77-92-9</td>
<td>-</td>
<td>15 mg / m³ (Total)</td>
<td>-</td>
</tr>
<tr>
<td>Iron(III) Chloride, Ferric Chloride 7705-08-0</td>
<td>TWA: 1 mg/m³ Fe</td>
<td>(vacated) TWA: 1 mg/m³ Fe</td>
<td>TWA: 1 mg/m³ Fe</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Wear chemical safety goggles or glasses. Do not wear contact lenses.

Skin and Body Protection
Wear protective gloves and protective clothing.

Respiratory Protection
No protection is ordinarily required under normal conditions of use and with adequate ventilation.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Green-yellow, thick liquid</td>
<td>Not determined</td>
</tr>
<tr>
<td>Color</td>
<td>Green-yellow</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>100 °C / 212 °F</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;38 °C / &gt;100 °F</td>
<td>Tag Closed Cup</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-Not applicable</td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not established</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>explosive Properties</td>
<td>Not determined</td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to Avoid
Keep separated from incompatible substances. Keep out of reach of children.

Incompatible Materials
Bases. Strong alkalis.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes severe eye damage.
Skin Contact Causes severe skin burns.
Inhalation Avoid breathing vapors or mists.
Ingestion May be harmful if swallowed.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvinyl alcohol</td>
<td>&gt; 20 g/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9002-89-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Citric Acid</td>
<td>= 3000 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>77-92-9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron(III) Chloride, Ferric Chloride</td>
<td>= 316 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>7705-08-0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Group 3 IARC components are "not classifiable as human carcinogens".

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvinyl alcohol 9002-89-5</td>
<td>Group 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend
IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity
Not determined
## 12. ECOLOGICAL INFORMATION

### Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Toxicity to microorganisms</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid 77-92-9</td>
<td>1516: 96 h Lepomis macrochirus mg/L LC50 static</td>
<td>120: 72 h Daphnia magna mg/L EC50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron(III) Chloride, Ferric Chloride 7705-08-0</td>
<td>75.6: 96 h Gambusia affinis mg/L LC50 static 20.26: 96 h Lepomis macrochirus mg/L LC50 semi-static 20.95 - 22.56: 96 h Pimephales promelas mg/L LC50 semi-static</td>
<td>27.9: 48 h Daphnia magna mg/L EC50 9.6: 48 h Daphnia magna mg/L EC50 Static</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Persistence/Degradability
Not determined.

### Bioaccumulation
Not determined.

### Mobility

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid 77-92-9</td>
<td>-1.72</td>
</tr>
<tr>
<td>Iron(III) Chloride, Ferric Chloride 7705-08-0</td>
<td>-4</td>
</tr>
</tbody>
</table>

### Other Adverse Effects
Not determined

## 13. DISPOSAL CONSIDERATIONS

### Waste Treatment Methods

#### Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

#### Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

### California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron(III) Chloride, Ferric Chloride 7705-08-0</td>
<td>Toxic Corrosive</td>
</tr>
</tbody>
</table>
14. TRANSPORT INFORMATION

**Note**
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

**DOT**
- UN/ID No: UN2582
- Proper Shipping Name: Ferric chloride solution
- Hazard Class: 8
- Packing Group: III

**IATA**
- UN/ID No: UN2582
- Proper Shipping Name: Ferric chloride solution
- Hazard Class: 8
- Packing Group: III

**IMDG**
- UN/ID No: UN2582
- Proper Shipping Name: Ferric chloride solution
- Hazard Class: 8
- Packing Group: III

15. REGULATORY INFORMATION

### International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citric Acid</td>
<td></td>
<td></td>
<td></td>
<td>Present</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Iron(III) Chloride, Ferric Chloride</td>
<td>Present</td>
<td></td>
<td>Present</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend:
- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- **EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- **ENCS** - Japan Existing and New Chemical Substances
- **IECSC** - China Inventory of Existing Chemical Substances
- **KECL** - Korean Existing and Evaluated Chemical Substances
- **PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- **AICS** - Australian Inventory of Chemical Substances

### US Federal Regulations

**CERCLA**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron(III) Chloride, Ferric Chloride</td>
<td>1000 lb</td>
<td></td>
<td>RQ 1000 lb final RQ</td>
</tr>
<tr>
<td>7705-08-0</td>
<td></td>
<td></td>
<td>RQ 454 kg final RQ</td>
</tr>
</tbody>
</table>

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**CWA (Clean Water Act)**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron(III) Chloride, Ferric Chloride</td>
<td>1000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron(III) Chloride, Ferric Chloride 7705-08-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not determined</td>
<td>Not determined</td>
<td>0</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Issue Date: 23-Apr-2013
Revision Date: 13-Jan-2015
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet
1. IDENTIFICATION

**Product Identifier**
- **Product Name**: C&B Metabond Enamel Etchant

**Other means of identification**
- **SDS #**: S395
- **UN/ID No**: UN1805

**Recommended use of the chemical and restrictions on use**
- **Recommended Use**: Dental Adhesive System.

**Details of the supplier of the safety data sheet**
- **Supplier Address**: Parkell, Inc.
  - 300 Executive Drive
  - Edgewood, NY 11717
- **Emergency Telephone Number**
  - **Company Phone Number**: (631) 249-1134
  - **Emergency Telephone (24 hr)**
    - INFOTRAC 1-352-323-3500 (International)
    - 1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

**Appearance**
- Orange-red, syrup-like liquid

**Physical State**
- Liquid

**Classification**

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Category</th>
<th>Sub-category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1</td>
<td>Sub-category C</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
<td></td>
</tr>
</tbody>
</table>

**Hazards Not Otherwise Classified (HNOC)**
- May be harmful if swallowed
- May be harmful in contact with skin

**Signal Word**
- Danger

**Hazard Statements**
- Causes severe skin burns and eye damage
1. IDENTIFICATION

Product Identifier
Product Name C&B Metabond Powders

Other means of identification
SDS # S396, VAR.

Recommended use of the chemical and restrictions on use
Recommended Use Dental Adhesive System.

Details of the supplier of the safety data sheet
Supplier Address Parkell, Inc.
300 Executive Drive
Edgewood, NY 11717

Emergency Telephone Number
Company Phone Number (631) 249-1134
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Tan powder
Physical State Solid

Classification
This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metal Oxide</td>
<td>1314-23-4</td>
<td>Proprietary</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

- **Eye Contact**: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation occurs.
- **Skin Contact**: Wash off immediately with plenty of water.
- **Inhalation**: Remove to fresh air. Get medical attention for any breathing difficulty.
- **Ingestion**: Clean mouth with water and drink afterwards plenty of water.
Most important symptoms and effects

Symptoms
Direct contact with eyes may cause temporary irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Unsuitable Extinguishing Media
Not determined.

Specific Hazards Arising from the Chemical
Combustion products may be toxic.

Hazardous Combustion Products
Carbon monoxide.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions
Use personal protection recommended in Section 8.

Environmental Precautions
Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up
Sweep up and shovel into suitable containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling
Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions
Keep container tightly closed and store in a cool, dry and well-ventilated place. Store away from other materials which may cause cross-contamination.

Incompatible Materials
None known based on information supplied.
8. EXPOSURE CONTROLS/PERSoNAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zirconium Oxide</td>
<td>STEL: 10 mg/m³ Zr</td>
<td>TWA: 5 mg/m³ Zr</td>
<td>IDLH: 25 mg/m³ Zr</td>
</tr>
<tr>
<td></td>
<td>TWA: 5 mg/m³ Zr</td>
<td>(vacated) TWA: 5 mg/m³ Zr</td>
<td>TWA: 5 mg/m³ except Zirconium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(vacated) STEL: 10 mg/m³ Zr</td>
<td>tetrachloride Zr</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STEL: 10 mg/m³ Zr</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Use safety glasses.

Skin and Body Protection
Use rubber or PVC gloves.

Respiratory Protection
No protection is ordinarily required under normal conditions of use and with adequate ventilation.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>Not applicable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not applicable</td>
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</tr>
<tr>
<td>Vapor Pressure</td>
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<td></td>
</tr>
<tr>
<td>Vapor Density</td>
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<td></td>
</tr>
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<td>Specific Gravity</td>
<td>1.96</td>
<td>(Water = 1)</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
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<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children.

Incompatible Materials
None known based on information supplied.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact
Avoid contact with eyes.

Skin Contact
Avoid contact with skin.

Inhalation
Avoid inhalation of dust.

Ingestion
Do not ingest.

Component Information
Not available

Information on physical, chemical and toxicological effects

Symptoms
Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity
Group 3 IARC components are "not classifiable as human carcinogens".

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polymethylmethacrylate (PMMA)</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend
IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity
Not determined
12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information
Not available

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

Note
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
Not regulated

IATA
Not regulated

IMDG
Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zirconium Oxide</td>
<td>Present</td>
<td>X</td>
<td></td>
<td>Present</td>
<td></td>
<td></td>
<td>X</td>
<td>Present</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and New Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
US Federal Regulations

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
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<tbody>
<tr>
<td>Zirconium Oxide</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>1314-23-4</td>
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16. OTHER INFORMATION

<table>
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<tr>
<th>NFPA</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Instability</th>
<th>Special Hazards</th>
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</thead>
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<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Not determined</td>
<td>Not determined</td>
<td>Not determined</td>
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</tbody>
</table>

Issue Date: 23-Apr-2013
Revision Date: 13-Jan-2015
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet
Precautionary Statements - Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a poison center or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a poison center or doctor/physician
IF SWALLOWED: Call a poison center or doctor/physician
Rinse mouth
Do not induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>7664-38-2</td>
<td>30-80</td>
</tr>
</tbody>
</table>

*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.*

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

Skin Contact
Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Immediately call a poison center or doctor/physician.

Ingestion
Promptly give several glasses of water or milk to drink to dilute. Then give milk of magnesia or aluminum hydroxide gel. Do not induce vomiting; if it occurs, give more fluid, especially milk. Get medical attention.

Most important symptoms and effects

Symptoms
Causes severe skin burns and eye damage. Ingestion can result in severe gastrointestinal damage. Inhalation is not a hazard unless misted or heated at high temperature. Mist inhalation may cause coughing, sneezing, salivation, and difficulty breathing. Severe exposures may lead to chemical pneumonitis.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.
5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical
Phosphoric acid does not burn; however, it can react with metal to liberate hydrogen gas that can readily form flammable or explosive mixtures with air. When exposed to flame, it emits toxic fumes and gases.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protection recommended in Section 8.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up For small spills and residues, cover with soda ash or soda ash-slaked lime mixture (1:1). Pick-up and place in polyolefin bottle for disposal. Flush spill area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Avoid contact with skin, eyes or clothing. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Store away from direct sunlight, sources of heat, alkalis, sulfides, cyanides, and metal powders. Store locked up.

Packaging Materials Do not store in metal containers.

Incompatible Materials Reacts vigorously with carbonates, alkalis, and powdered metals to form phosphate salts and is corrosive (especially at temp. 85°C) to common metals. Liberates hydrogen gas when reacting with metals.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
</table>
| Phosphoric Acid 7664-38-2 | STEL: 3 mg/m³  
TWA: 1 mg/m³ | TWA: 1 mg/m³  
(vacated) TWA: 1 mg/m³  
(vacated) STEL: 3 mg/m³ | IDLH: 1000 mg/m³  
TWA: 1 mg/m³  
STEL: 3 mg/m³ |

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Wear chemical safety goggles and/or face shield for mist or where splashing is possible. Do not wear contact lenses.

Skin and Body Protection
Use rubber gloves and apron.

Respiratory Protection
Respiratory protection is not required for normal work procedures, but if misting occurs, use a high efficiency particulate respirator or self-contained breathing apparatus with full face piece needed above TLV.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>135 °C / 275 °F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>Non-flammable</td>
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<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
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<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-Not applicable</td>
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<tr>
<td>Upper Flammability Limits</td>
<td>Not established</td>
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</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>Not established</td>
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</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not established</td>
<td></td>
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</tr>
<tr>
<td>Vapor Density</td>
<td>Not established</td>
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<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>Not established</td>
<td></td>
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<tr>
<td>Water Solubility</td>
<td>Not determined</td>
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</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
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</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not determined</td>
<td></td>
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</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions.

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Hazardous Polymerization
Hazardous polymerization does not occur.

Conditions to Avoid

Incompatible Materials
Reacts vigorously with carbonates, alkalis, and powdered metals to form phosphate salts and is corrosive (especially at temperature 85°C) to common metals. Liberates hydrogen gas when reacting with metals.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact
Causes severe eye damage.

Skin Contact
Causes severe skin burns. May be harmful in contact with skin.

Inhalation
Avoid breathing vapors or mists.

Ingestion
May be harmful if swallowed.

Component Information

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>= 1530 mg/kg</td>
<td>= 2730 mg/kg</td>
<td>&gt; 850 mg/m³</td>
</tr>
<tr>
<td>7664-38-2</td>
<td>( Rat )</td>
<td>( Rabbit )</td>
<td>( Rat ) 1 h</td>
</tr>
<tr>
<td>Polyvinyl alcohol</td>
<td>&gt; 20 g/kg</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>9002-89-5</td>
<td>( Rat )</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Information on physical, chemical and toxicological effects

Symptoms
Please see section 4 of this SDS for symptoms.
Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity

Group 3 IARC components are "not classifiable as human carcinogens".

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvinyl alcohol</td>
<td>9002-89-5</td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Legend

IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information
Not available

Persistence/Degradability
Not determined.

Bioaccumulation
Not determined.

Mobility
Not determined

Other Adverse Effects
Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
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</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>Corrosive</td>
</tr>
<tr>
<td>7664-38-2</td>
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</tbody>
</table>
14. TRANSPORT INFORMATION

Note: Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

<table>
<thead>
<tr>
<th>UN/ID No</th>
<th>UN1805</th>
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<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Phosphoric acid solution</td>
</tr>
<tr>
<td>Hazard Class</td>
<td>8</td>
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<tr>
<td>Packing Group</td>
<td>III</td>
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IATA

<table>
<thead>
<tr>
<th>UN/ID No</th>
<th>UN1805</th>
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<tbody>
<tr>
<td>Proper Shipping Name</td>
<td>Phosphoric acid solution</td>
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<tr>
<td>Hazard Class</td>
<td>8</td>
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<tr>
<td>Packing Group</td>
<td>III</td>
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IMDG

<table>
<thead>
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<th>UN/ID No</th>
<th>UN1805</th>
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<tr>
<td>Proper Shipping Name</td>
<td>Phosphoric acid solution</td>
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<tr>
<td>Hazard Class</td>
<td>8</td>
</tr>
<tr>
<td>Packing Group</td>
<td>III</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>Present</td>
<td>X</td>
<td></td>
<td>Present</td>
<td>Present</td>
<td>X</td>
<td>Present</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid 7664-38-2</td>
<td>5000 lb</td>
<td>RQ 5000 lb final RQ</td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid</td>
<td>5000 lb</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric Acid 7664-38-2</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

NFPA
Health Hazards
2
Flammability
2
Instability
0
Special Hazards
Not determined

HMIS
Health Hazards
Not determined
Flammability
Not determined
Physical Hazards
Not determined
Personal Protection
Not determined

Issue Date: 23-Apr-2013
Revision Date: 13-Jan-2015
Revision Note: New format

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet
MATERIAL SAFETY DATA SHEET

1. Identification of the substance or mixture and of the supplier

1.1 Product Name:
Glaslonomer Cement Type II “POWDER”

1.2 Company/Undertaking identification
Manufacturer’s Name: SHOFU INC.
Address: 11 Kamitakamatsu-cho, Fukunine, Higashiyama-ku, Kyoto 605-0983, JAPAN
Phone: +81-75-581-1112
Fax: +81-75-561-2273
Section in Charge: Quality Assurance Section
Date Prepared: 2011.11.10

1.3 Emergency Telephone Number
+81-75-561-1112

2. Hazards identification

GHS CLASSIFICATION
It is not possible to classify it.

LABEL ELEMENTS
- SYMBOL
- SIGNAL WORD
- HAZARD STATEMENTS

PRECAUTIONARY STATEMENTS

[Prevention]
Obtain special instruction before use.
Do not handle until all safety precautions have been read and understood.
Do not breathe dust/fume/gas/mist/vapours/spray.
Keep container tightly closed.
Wash hands thoroughly after handling.
Avoid release to the environment.

[Response]
If you feel un-well, get medical advice/attention.
If on skin, wash with plenty of soap and water. If on skin, skin irritation, get medical advice/attention.
If in eyes, rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do.
If eye irritation persists, get medical advice/attention.

[Storage]
Store in a cool and dark area.

[Disposal]
Dispose of contents and container in accordance with regulation.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Composition</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alumino fluoro silicate glass</td>
<td>&gt;90%</td>
</tr>
<tr>
<td>Hazardous ingredients are not include.</td>
<td></td>
</tr>
</tbody>
</table>

4. First-aid measures

4.1 Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present.
MATERIAL SAFETY DATA SHEET
and easy to do. If eye irritation persists, get medical advice/attention.

4.2 Skin contact: Wash immediately with soap and plenty of water. If on skin, skin irritation, get medical advice/attention.
4.3 Ingestion: Rinse mouth and seek medical advice if necessary.
4.4 Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptom concerning breath gose out, call a POISON CENTER to doctor.

5. Fire-fighting measures
This product is non-flammable.

5.1 Suitable Extinguishing Media: N/A
5.2 Extinguishing Media Should not be used: N/A
5.3 Special Exposure Hazards Arising: N/A
5.4 Special Protective Equipment: N/A

6. Accidental release measures
6.1 Personal Precautions: See section 8. Avoid contact with eyes and skin.
6.2 Environmental Precautions: Send to approved treatment/disposal company or dispose according to local, state and federal regulations.
6.3 Methods for Cleaning Up: Wipe up and discard in a suitable container.

7. Handling And Storage
7.1 Handling: Local dust extraction measures are recommended. Avoid prolonged inhalation. Handling of the product exclusively restrict to dental specialists, according to the instruction for use.
7.2 Storage: Store in a cool and dry conditions with lid tightly closed.

8. Exposure controls/personal protection
8.1 Exposure limits: ACGIH TLV.
8.2 Respiratory Protection: Dust mask (may be)
8.3 Hand Protection: Latex or rubber gloves
8.4 Eye Protection: Safety goggles or eye protection.
8.5 Skin Protection: Not required. General protective overalls.

9. Physical and chemical properties
9.1 Appearance/Odour/pH: White odourless powder
9.2 Boiling Point/Boiling Range: N/D
9.3 Melting Point/Melting Range: N/D
9.4 Flash point: N/D
9.5 Auto flammability: N/D
9.6 Explosive Properties: N/D
9.7 Oxidizing Properties: N/D
9.8 Vapour Pressure: N/D
9.9 Relative Density: ≈ 2.5
9.10 Solubility: water solubility Insoluble

10. Stability and reactivity
10.1 Stability: Stable under recommended storage conditions.
10.2 Reactivity: N/A
MATERIAL SAFETY DATA SHEET

10.3 Condition to avoid: Avoid direct sunlight and high temperature.
10.4 Materials to avoid: N/A

11. Toxicological information
   No information

12. Ecological information
   No information

13. Disposal considerations
   Dispose of contents/container to in accordance with local/regional/national/international regulations.

14. Transport information
   Airline restriction information: It doesn’t correspond.
   UN No.: It doesn’t correspond.
   Sea restriction information: It doesn’t correspond.
   UN No.: It doesn’t correspond.

15. Regulatory information
   Follow all regulations in your country.

16. Other information
   This product is intended for use by dental professionals. (instrument/material)

~Verified on 2014-09 by Henry Schein to be the most current version of the SDS. To be verified again on 2017-09.~
SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Material: GLY-OXIDE LIQUID
Synonyms: GLY-OXIDE LIQUID (US) * MFC 50004068 * CARBAMIDE PEROXIDE, FORMULATED PRODUCT
Company Name: GlaxoSmithKline, Corporate Environment, Health & Safety
980 Great West Road
Brentford, Middlesex TW8 9GS UK
UK General Information: +44-20-8047-5000
Transport Emergency (EU) +44-1865-407333
Medical Emergency +1-612-221-3999, Ext 221
Information and Advice: US number, available 24 hours
Multi-language response

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS RN</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>NON-HAZARDOUS INGREDIENTS</td>
<td>Unassigned</td>
<td>89.2</td>
</tr>
<tr>
<td>HYDROGEN PEROXIDE</td>
<td>7722-84-1</td>
<td>4</td>
</tr>
<tr>
<td>UREA</td>
<td>57-13-6</td>
<td>6.8</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Fire and Explosion: This product is classified as non-flammable.
Health: Handling this product in its final form presents minimal risk from occupational exposure.
Health effects information is based on hazards of components.
Environment: Dangerous for the environment. Harmful to aquatic organisms.

4. FIRST-AID MEASURES

Ingestion: Never attempt to induce vomiting. Do not attempt to give any solid or liquid by mouth if the exposed subject is unconscious or semi-conscious. Wash out the mouth with water. If the exposed subject is fully conscious, give plenty of water to drink. Obtain medical attention.

~Verified on 2013-5 by Henry Schein to be the most current version of the SDS. To be verified again on 2016-5.
Inhalation
Physical form suggests that risk of inhalation exposure is negligible.

Skin Contact
Using appropriate personal protective equipment, remove contaminated clothing and flush exposed area with large amounts of water. Obtain medical attention if skin reaction occurs, which may be immediate or delayed.

Eye Contact
Wash immediately with clean and gently flowing water. Continue for at least 15 minutes. Obtain medical attention.

NOTES TO HEALTH PROFESSIONALS

Medical Treatment
Treat according to locally accepted protocols. For additional guidance, refer to the local poison control information centre.

Medical Conditions Caused or Aggravated by Exposure
None for occupational exposure.

Health Surveillance Procedures
Pre-placement and periodic health surveillance is not usually indicated. The final determination of the need for health surveillance should be determined by local risk assessment.

Antidotes
No specific antidotes are recommended.

5. FIRE-FIGHTING MEASURES

Fire and Explosion Hazards
Not expected for the product, although the packaging is combustible.

Extinguishing Media
Water, dry powder or foam extinguishers are recommended. Carbon dioxide extinguishers may be ineffective.

Special Firefighting Procedures
For single units (packages): No special requirements needed.
For larger amounts (multiple packages/pallets) of product: Since toxic, corrosive or flammable vapours might be evolved from fires involving this product and associated packaging, self contained breathing apparatus and full protective equipment are recommended for firefighters.
If possible, contain and collect firefighting water for later disposal.

Hazardous Combustion Products
Toxic, corrosive or flammable thermal decomposition products are expected when the product is exposed to fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Wear protective clothing and equipment consistent with the degree of hazard.

Environmental Precautions
For large spills, take precautions to prevent entry into waterways, sewers, or surface drainage systems.

Clean-up Methods
Spread an inert absorbent on the spill and place in a suitable, properly labelled container for recovery or disposal.

Decontamination Procedures
No specific decontamination or detoxification procedures have been identified for this product.

7. HANDLING AND STORAGE

HANDLING

General Requirements
No special control measures required for the normal handling of this product. Normal room ventilation is expected to be adequate for routine handling of this product.

STORAGE
Keep containers tightly closed in a cool, well ventilated area. No storage requirements necessary for occupational hazards. Follow product information storage instructions to maintain efficacy.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Physical Form: Liquid.

10. STABILITY AND REACTIVITY

Stability: This product is expected to be stable.
Conditions to Avoid: None for normal handling of this product.

11. TOXICOLOGICAL INFORMATION

Oral Toxicity: Not expected to be toxic following ingestion.
Inhalation Toxicity: Overexposure may result in irritation of the respiratory tract.
Skin Effects: Minor irritation might occur following direct contact.
Eye Effects: Minor irritation might occur following direct contact with eyes.
Target Organ Effects: No specific target organ effects have been identified.
Sensitisation: Sensitisation (allergic skin reaction) is not expected.
Genetic Toxicity: No studies have been conducted.
Carcinogenicity: No components are listed as carcinogens by GSK, IARC, NTP or US OSHA.
* Reproductive Effects: Not expected to produce adverse effects on fertility or development under occupational exposure conditions.
* Other Adverse Effects: None known for occupational exposure.

12. ECOLOGICAL INFORMATION

Summary: This product contains an active ingredient that has been tested and which may be harmful if released directly to the environment. Appropriate precautions should be taken to limit release of this mixture to the environment. Local regulations and procedures should be consulted prior to environmental release.

ECOTOXICITY

Aquatic
Microtox: Microtox is a general toxicity test which utilizes a sensitive marine photo bacteria as the test species. This mixture contains a major component(s) that is harmful to these organisms.
EC50: 41.5 mg/l, 15 Minutes

Algal: This mixture contains a major component(s) that is toxic to algae.
IC50: 6.9 mg/l, 72 Hours, Chlorella vulgaris, green algae

Daphnid: This mixture contains a major component(s) that is toxic to daphnids.
EC50: 6.6 mg/l, 48 Hours, Daphnia pulex

Fish: This mixture contains a major component(s) that is harmful to some fish species tested.
Adult Pimephales promelas, fathead minnow
EC50: 45.4 mg/l, 96 Hours

Adult Oncorhyncus mykiss, rainbow trout
EC50: 88.5 mg/l, 96 Hours, Static test

Adult Lepomis macrochirus, bluegill sunfish
EC50: 155 mg/l, 96 Hours, Static test
MOBILITY

Solubility This mixture contains a major component(s) that for environmental fate predictions has solubility in water.

PERSISTENCE/DEGRADATION

Biodegradation The major component(s) of this mixture is not expected to persist in the environment.

BIOACCUMULATION This mixture contains a major component(s) with mobility and persistence data that suggests that the major component(s) is not likely to bioaccumulate in the food chain.

13. DISPOSAL CONSIDERATIONS

Disposal Recommendations Collect for recycling or recovery if possible. The disposal method for rejected products/returned goods must ensure that they cannot be re-sold or re-used.

Regulatory Requirements Observe all local and national regulations when disposing of this product.

14. TRANSPORT INFORMATION

The SDS should accompany all shipments for reference in the event of spillage or accidental release. Only authorised persons trained and competent in accordance with appropriate national and international regulatory requirements may prepare dangerous goods for transport.

UN Classification and Labelling

Transport Information Transportation and shipping of this product is not restricted. It has no known, significant hazards requiring special packaging or labelling for air, maritime, US or European ground transport purposes.

15. REGULATORY INFORMATION

The information included below is an overview of the major regulatory requirements. It should not be considered to be an exhaustive summary. Local regulations should be consulted for additional requirements.

* EU Classification and Labelling

Exempt from requirements of EU Dangerous Preparations directive - product regulated as a medicinal product, cosmetic product or medical device.


* Classification Exempt when packaged for sale to consumers in a retail establishment.

Other US Regulations

TSCA Status Exempt

16. OTHER INFORMATION

References GSK Hazard Determination

Date Approved/Revised 27-Jul-2005 SDS Version Number 2

SDS Sections Updated

Sections Subsections
COMPOSITION / INFORMATION ON INGREDIENTS European Union Classification and Labelling Requirements
REGULATORY INFORMATION US OSHA Standard (29 CFR Part 1910.1200) - Classification
TOXICOLOGY INFORMATION Other Adverse Effects Reproductive Effects
The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.
1 Identification

- **Product identifier**
  - **Trade name:** GC Fuji IX GP (Liquid)
    GC Fuji IX GP CAPSULE (Liquid)

- **Relevant identified uses of the substance or mixture and uses advised against**
  - **Dental material**
    The product is intended for professional use.
    To avoid risks for humans and environment obtain instructions.

- **Application of the substance / the mixture**
  - **Dental filling material**

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    GC America Inc.
    3737 W. 127th Street
    Alsip, IL 60803
    USA
    sds@gcamerica.com

- **Information department:** Regulatory Affairs
- **Emergency telephone number:**
  - During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
  - Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **Skin Corr. 1A H314** Causes severe skin burns and eye damage.
  - **Eye Dam. 1 H318** Causes serious eye damage.

- **Additional information:**
  - The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

- **Label elements**
- **GHS label elements**
  - The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**
  - GHS05

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  - polybasic carboxylic acid**
- **Hazard statements**
  - Causes severe skin burns and eye damage.
Trade name: GC Fuji IX GP (Liquid)
                GC Fuji IX GP CAPSULE (Liquid)

- Precautionary statements
  Do not breathe dusts or mists.
  Wear eye protection / face protection.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Immediately call a poison center/doctor.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  - NFPA ratings (scale 0 - 4)
    Health = 2
    Fire = 0
    Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    HEALTH 2
    FIRE 0
    REACTIVITY 0

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.
    - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
  polybasic carboxylic acid** 5-10%

- Additional information:
  If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA’s Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

4 First-aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  If symptoms persist consult doctor.
- After inhalation:
  Supply fresh air; consult doctor in case of complaints.
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
  Seek medical treatment.
Trade name: GC Fuji IX GP (Liquid)
GC Fuji IX GP CAPSULE (Liquid)

- After eye contact:
  - Protect unharmed eye.
  - Rinse opened eye for several minutes under running water.
  - Call a doctor immediately.
- After swallowing:
  - Rinse out mouth and then drink plenty of water.
  - If symptoms persist consult doctor.
- Information for doctor:
  - Most important symptoms and effects, both acute and delayed
    - No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed
    - No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    - CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
    - Use fire fighting measures that suit the environment.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
  - Special hazards arising from the substance or mixture
    - Formation of toxic gases is possible during heating or in case of fire.
  - Advice for firefighters
  - Protective equipment: Wear self-contained respiratory protective device.
  - Additional information
    - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  - Remove persons from danger area.
  - Avoid contact with the eyes and skin.
  - Wear protective clothing.
- Environmental precautions:
  - Do not allow product to reach sewage system or any water course.
  - Do not allow to penetrate the ground/soil.
- Methods and material for containment and cleaning up:
  - Use neutralizing agent.
  - Absorb liquid components with liquid-binding material.
  - Dispose of the collected material according to regulations.
- Reference to other sections
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.
7 Handling and storage

- Handling:
  - Precautions for safe handling
    Observe instructions for use.
    Ensure good ventilation/exhaustion at the workplace.
    Prevent formation of aerosols.
    Avoid contact with the eyes and skin.
  - Information about protection against explosions and fires: No special measures required.

- Storage:
  - Requirements to be met by storerooms and receptacles:
    Store only in unopened original receptacles.
  - Information about storage in one common storage facility: Store away from foodstuffs.
  - Further information about storage conditions:
    Observe instructions for use / storage.
    Keep receptacle tightly sealed.
  - Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters

- Components with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls

- Personal protective equipment:

- General protective and hygienic measures:
  The usual precautionary measures for handling chemicals should be followed.
  Avoid contact with the eyes and skin.
  Wash hands before breaks and at the end of work.
  Keep away from foodstuffs, beverages and feed.
  Immediately remove all soiled and contaminated clothing.

- Breathing equipment: Suitable respiratory protective device recommended.

- Protection of hands:

- Material of gloves
  The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- Penetration time of glove material
  The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- Eye protection: Safety glasses
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance:**
      - Form: Fluid
      - Color: Light yellow
      - Odor: Odorless
      - Odor threshold: Not determined.
    - **pH-value at 20 °C (68 °F):** 1.9
  - **Change in condition**
    - Melting point/Melting range: Undetermined.
    - Boiling point/Boiling range: Undetermined.
  - **Flash point:** Not applicable.
  - **Flammability (solid, gaseous):** Not applicable.
  - **Ignition temperature:** Undetermined.
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Explosion limits:**
    - Lower: Not determined.
    - Upper: Not determined.
  - **Vapor pressure:** Not determined.
  - **Density:** Not determined.
  - **Relative density**
    - Not determined.
  - **Vapour density**
    - Not determined.
  - **Evaporation rate**
    - Not determined.
  - **Solubility in / Miscibility with**
    - Water: Insoluble.
  - **Partition coefficient (n-octanol/water):** Not determined.
  - **Viscosity:**
    - Dynamic: Not determined.
    - Kinematic: Not determined.
  - **Solvent content:**
    - Organic solvents: 0.0 %
    - Water: 50.0 %
  - **Solids content:** 100.0 %
  - **Other information**
    - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.


11 Toxicological information

· Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification: No further relevant information available.

· Primary irritant effect:

· on the skin: Strong caustic effect on skin and mucous membranes.

· on the eye:

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

· Sensitization: No sensitizing effects known.

· Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

poly(acrylic acid) 3

· NTP (National Toxicology Program)

None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· Carcinogenic categories' legend:

IARC Group 1: The agent is carcinogenic to humans.

IARC Group 2A: The agent is probably carcinogenic to humans.

IARC Group 2B: The agent is possibly carcinogenic to humans.

IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.

IARC Group 4: The agent is probably not carcinogenic to humans.

NTP K: Known to be human carcinogen.

NTP R: Reasonably anticipated to be human carcinogen.

12 Ecological information

· Toxicity

· Aquatic toxicity: No further relevant information available.

· Persistence and degradability: No further relevant information available.

· Behavior in environmental systems:

· Bioaccumulative potential: No further relevant information available.

· Mobility in soil: No further relevant information available.
Trade name: GC Fuji IX GP (Liquid)
GC Fuji IX GP CAPSULE (Liquid)

- Additional ecological information:

- General notes:
  Water hazard class 1 (Self-assessment): slightly hazardous for water
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  Must not reach bodies of water or drainage ditch undiluted or unneutralized.
  Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

- Other adverse effects
  No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
    Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  DOT, ADR, ADN, IMDG, IATA: Void

- UN proper shipping name
  DOT, ADR, ADN, IMDG, IATA: Void

- Transport hazard class(es)
  DOT, ADR, ADN, IMDG, IATA: Void

- Packing group
  DOT, ADR, IMDG, IATA: Void

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user
  Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
  Not applicable.

- UN "Model Regulation": -
## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **SARA (Superfund Amendments and Reauthorization Act)**
    - **Section 355 (extremely hazardous substances):** None of the ingredient is listed.
  - **Section 313 (Specific toxic chemical listings):** None of the ingredients is listed.
  - **TSCA (Toxic Substances Control Act):** All ingredients are listed.

- **Carcinogenic categories**
  - **EPA (Environmental Protection Agency)** None of the ingredients is listed.
  - **TLV (Threshold Limit Value established by ACGIH)** None of the ingredients is listed.
  - **NIOSH-Ca (National Institute for Occupational Safety and Health)** None of the ingredients is listed.

- **GHS label elements**
  - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - ![GHS05](image)

- **Signal word** Danger
- **Hazard-determining components of labeling:** polybasic carboxylic acid**
- **Hazard statements**
  - Causes severe skin burns and eye damage.
- **Precautionary statements**
  - **Do not breathe dusts or mists.**
  - Wear eye protection / face protection.
  - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - Immediately call a poison center/doctor.
  - Store locked up.
  - Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

- **Department issuing MSDS:** Regulatory Affairs

(Contd. on page 9)
Trade name: GC Fuji IX GP (Liquid)
GC Fuji IX GP CAPSULE (Liquid)

· Contact:
  Regulatory Affairs
  Telephone No. +1 (708) 597-0900
  sds@gcamerica.com

· Date of preparation / last revision: 02/24/2015 / -

· Abbreviations and acronyms:
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  HCS: Hazard Communication Standard (USA)
  MSDS: Material Safety Data Sheet
  SDS: Safety Data Sheet
  ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)
  ECHA: European Chemicals Agency
  OSHA: Occupational Safety and Health Administration (USA)
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
  Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

· Sources
  • Manufacturers' MSDS/SDSs
  • OSHA (https://www.osha.gov/dts/chemicalsampling/toc/chmcas.html)
  • TOXNET (http://toxnet.nlm.nih.gov/)
  • ECHA (http://echa.europa.eu/)
  • EnviChem (www.echemportal.org)

· Notes:
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· * Data compared to the previous version altered. This version replaces all previous versions.

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1 Identification

- **Product identifier**
- **Trade name**: GC Fuji IX GP EXTRA (Liquid)

- **Relevant identified uses of the substance or mixture and uses advised against**
  - Dental material
    - The product is intended for professional use.
    - To avoid risks for humans and environment obtain instructions.

- **Application of the substance / the mixture** Dental filling material

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier**: GC America Inc.
    - 3737 W. 127th Street
    - Alsip, IL 60803
    - USA
    - sds@gcamerica.com
  - **Information department**: Regulatory Affairs
  - **Emergency telephone number**:
    - During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
    - Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - Skin Corr. 1A H314 Causes severe skin burns and eye damage.
  - Eye Dam. 1 H318 Causes serious eye damage.

- **Additional information**:
  - The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

- **Label elements**
  - **GHS label elements**
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - GHS05

- **Signal word** Danger

- **Hazard-determining components of labeling**:
  - polybasic carboxylic acid**

- **Hazard statements**
  - Causes severe skin burns and eye damage.

(Contd. on page 2)
Precautionary statements
Do not breathe dusts or mists.
Wear eye protection / face protection.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)
- Health = 2
- Fire = 0
- Reactivity = 0

HMIS-ratings (scale 0 - 4)
- Health = 2
- Fire = 0
- Reactivity = 0

Other hazards

Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures
Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:
- polybasic carboxylic acid** 5-10%

Additional information:
If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA’s Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

4 First-aid measures

Description of first aid measures
General information:
Immediately remove any clothing soiled by the product.
If symptoms persist consult doctor.
After inhalation:
Supply fresh air; consult doctor in case of complaints.
In case of unconsciousness place patient stably in side position for transportation.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
Seek medical treatment.
**Safety Data Sheet**
acc. to OSHA HCS 29 CFR 1910.1200

**Trade name:** GC Fuji IX GP EXTRA (Liquid)

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4. **Fire-fighting measures**

   - **Extinguishing media**
     - **Suitable extinguishing agents:**
       - CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
       - Use fire fighting measures that suit the environment.
     - **For safety reasons unsuitable extinguishing agents:** Water with full jet
     - **Special hazards arising from the substance or mixture**
       - Formation of toxic gases is possible during heating or in case of fire.
   - **Advice for firefighters**
     - **Protective equipment:** Wear self-contained respiratory protective device.
     - **Additional information**
       - Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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5. **Accidental release measures**

   - **Personal precautions, protective equipment and emergency procedures**
     - Remove persons from danger area.
     - Avoid contact with the eyes and skin.
     - Wear protective clothing.
   - **Environmental precautions:**
     - Do not allow product to reach sewage system or any water course.
     - Do not allow to penetrate the ground/soil.
   - **Methods and material for containment and cleaning up:**
     - Use neutralizing agent.
     - Absorb liquid components with liquid-binding material.
     - Dispose of the collected material according to regulations.
   - **Reference to other sections**
     - See Section 7 for information on safe handling.
     - See Section 8 for information on personal protection equipment.
     - See Section 13 for disposal information.

---

6. **Handling and storage**

   - **Handling:**
     - **Precautions for safe handling**
       - Observe instructions for use.
40.1.1 Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols. Avoid contact with the eyes and skin.

- Information about protection against explosions and fires: No special measures required.

- Storage:
  - Requirements to be met by storerooms and receptacles: Store only in unopened original receptacles.
  - Information about storage in one common storage facility: Store away from foodstuffs.
  - Further information about storage conditions: Observe instructions for use / storage. Keep receptacle tightly sealed.

- Specific end use(s) No further relevant information available.

### 8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.

- Control parameters
  - Components with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

- Additional information: The lists that were valid during the creation were used as basis.

- Exposure controls
  - Personal protective equipment:
    - General protective and hygienic measures: The usual precautionary measures for handling chemicals should be followed. Avoid contact with the eyes and skin. Wash hands before breaks and at the end of work. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing.
    - Breathing equipment: Suitable respiratory protective device recommended.
    - Protection of hands: Protective gloves
      - Material of gloves: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
      - Penetration time of glove material: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    - Eye protection: Safety glasses

### 9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - Appearance:
      - Form: Liquid
      - Color: Light yellow

(Contd. on page 5)
## 40.1.1

- **Odor:** Odorless
- **Odor threshold:** Not determined.
- **pH-value at 20 °C (68 °F):** 1.9
- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** Undetermined.
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
- **Vapor pressure:** Not determined.
- **Density:** Not determined.
- **Relative density**
  - **Vapour density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility in / Miscibility with**
  - **Water:** Insoluble.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Viscosity:**
  - **Dynamic:** Not determined.
  - **Kinematic:** Not determined.
- **Solvent content:**
  - **Organic solvents:** 0.0 %
  - **Water:** 52.0 %
- **Solids content:** 48.0 %
- **Other information:** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability** Stable at ambient temperature.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- LD/LC50 values that are relevant for classification: No further relevant information available.
- Primary irritant effect:
  - on the skin: Strong caustic effect on skin and mucous membranes.
  - on the eye: Strong caustic effect. Strong irritant with the danger of severe eye injury.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Corrosive

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    poly(acrylic acid) 3
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.
- Carcinogenic categories' legend:
  IARC Group 1: The agent is carcinogenic to humans.
  IARC Group 2A: The agent is probably carcinogenic to humans.
  IARC Group 2B: The agent is possibly carcinogenic to humans.
  IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.
  IARC Group 4: The agent is probably not carcinogenic to humans.
  NTP K: Known to be human carcinogen.
  NTP R: Reasonably anticipated to be human carcinogen.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 1 (Self-assessment): slightly hazardous for water
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
  Must not reach bodies of water or drainage ditch undiluted or unneutralized.
  Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low
Trade name: GC Fuji IX GP EXTRA (Liquid)

40.1.1 water-dangerous.

- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, ADR, ADN, IMDG, IATA Void
- UN proper shipping name
  - DOT, ADR, ADN, IMDG, IATA Void
- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA Void
- Class Void
- Packing group
  - DOT, ADR, IMDG, IATA Void
- Environmental hazards:
  - Marine pollutant: No
- Special precautions for user Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.
- UN "Model Regulation": -

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - SARA (Superfund Amendments and Reauthorization Act)
    - Section 355 (extremely hazardous substances):
      None of the ingredient is listed.
    - Section 313 (Specific toxic chemical listings):
      None of the ingredients is listed.
### Trade name: GC Fuji IX GP EXTRA (Liquid)

| · **TSCA (Toxic Substances Control Act):** | All ingredients are listed. |
| · **Carcinogenic categories** | |
| · **EPA (Environmental Protection Agency)** | None of the ingredients is listed. |
| · **TLV (Threshold Limit Value established by ACGIH)** | None of the ingredients is listed. |
| · **NIOSH-Ca (National Institute for Occupational Safety and Health)** | None of the ingredients is listed. |
| · **GHS label elements** | The product is classified and labeled according to the Globally Harmonized System (GHS). |
| · **Hazard pictograms** | GHS05 |

**Signal word** Danger

**Hazard-determining components of labeling:**
- polybasic carboxylic acid**

**Hazard statements**
- Causes severe skin burns and eye damage.

**Precautionary statements**
- Do not breathe dusts or mists.
- Wear eye protection / face protection.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a poison center/doctor.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

**Department issuing MSDS:** Regulatory Affairs

**Contact:**
- Regulatory Affairs
- Telephone No. +1 (708) 597-0900
- sds@gcamerica.com

**Date of preparation / last revision** 02/24/2015 / -

**Abbreviations and acronyms:**
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- HCS: Hazard Communication Standard (USA)
- MSDS: Material Safety Data Sheet
- SDS: Safety Data Sheet
- ECHA: European Chemicals Agency
- OSHA: Occupational Safety and Health Administration (USA)
Safety Data Sheet
acc. to OSHA HCS 29 CFR 1910.1200

Trade name: GC Fuji IX GP EXTRA (Liquid)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Sources
- Manufacturers' MSDS/SDSs
- TOXNET (http://toxnet.nlm.nih.gov/)
- ECHA (http://echa.europa.eu/)
- EnviChem (www.echemportal.org)

Notes:
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* Data compared to the previous version altered. This version replaces all previous versions.

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1 Identification

- **Product identifier**
  - **Trade name:** GC Fuji IX GP FAST (Liquid)

- **Relevant identified uses of the substance or mixture and uses advised against**
  - Dental material
  - The product is intended for professional use.
  - To avoid risks for humans and environment obtain instructions.

- **Application of the substance / the mixture**
  - Dental filling material

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - GC America Inc.
    - 3737 W. 127th Street
    - Alsip, IL 60803
    - USA
    - sds@gcamerica.com
  - **Information department:** Regulatory Affairs
  - **Emergency telephone number:**
    - During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
    - Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - Skin Corr. 1A H314 Causes severe skin burns and eye damage.
  - Eye Dam. 1 H318 Causes serious eye damage.

- **Additional information:**
  - The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

- **Label elements**
  - **GHS label elements**
    - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms**
    - [GHS05]

- **Signal word**
  - Danger

- **Hazard-determining components of labeling:**
  - polybasic carboxylic acid**

- **Hazard statements**
  - Causes severe skin burns and eye damage.
Trade name: GC Fuji IX GP FAST (Liquid)

- Precautionary statements
  Do not breathe dusts or mists.
  Wear eye protection / face protection.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Immediately call a poison center/doctor.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  NFPA ratings (scale 0 - 4)
  Health = 2
  Fire = 0
  Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  HEALTH: Health = 2
  FIRE: Fire = 0
  REACTIVITY: Reactivity = 0

- Other hazards
  Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.

- Dangerous components:
  polybasic carboxylic acid**  5-10%

- Additional information:
  If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA’s Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

4 First-aid measures

- Description of first aid measures
  General information:
  Immediately remove any clothing soiled by the product.
  If symptoms persist consult doctor.
  After inhalation:
  Supply fresh air; consult doctor in case of complaints.
  In case of unconsciousness place patient stably in side position for transportation.
  After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
  Seek medical treatment.

(Contd. on page 3)
Safety Data Sheet
acc. to OSHA HCS 29 CFR 1910.1200

Trade name: GC Fuji IX GP FAST (Liquid)

40.1.1 After eye contact:
Protect unharmed eye.
Rinse opened eye for several minutes under running water.
Call a doctor immediately.

Information for doctor:
Most important symptoms and effects, both acute and delayed
No further relevant information available.

Indication of any immediate medical attention and special treatment needed
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire fighting measures that suit the environment.

For safety reasons unsuitable extinguishing agents: Water with full jet

Special hazards arising from the substance or mixture
Formation of toxic gases is possible during heating or in case of fire.

Advice for firefighters
Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Remove persons from danger area.
Avoid contact with the eyes and skin.
Wear protective clothing.

Environmental precautions:
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.

Methods and material for containment and cleaning up:
Use neutralizing agent.
Absorb liquid components with liquid-binding material.
Dispose of the collected material according to regulations.

Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling
Observe instructions for use.
Trade name: GC Fuji IX GP FAST (Liquid)

Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Avoid contact with the eyes and skin.

- **Information about protection against explosions and fires**: No special measures required.

- **Storage**
  - **Requirements to be met by storerooms and receptacles**: Store only in unopened original receptacles.
  - **Information about storage in one common storage facility**: Store away from foodstuffs.
  - **Further information about storage conditions**: Observe instructions for use / storage. Keep receptacle tightly sealed.

- **Specific end use(s)**: No further relevant information available.

---

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems**: No further data; see item 7.

- **Control parameters**
  - **Components with limit values that require monitoring at the workplace**: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - **Additional information**: The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment**
    - **General protective and hygienic measures**: The usual precautionary measures for handling chemicals should be followed. Avoid contact with the eyes and skin. Wash hands before breaks and at the end of work. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing.
    - **Breathing equipment**: Suitable respiratory protective device recommended.
  - **Protection of hands**: Protective gloves
  - **Material of gloves**: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
  - **Penetration time of glove material**: The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
  - **Eye protection**: Safety glasses

---

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
    - **Appearance**
      - **Form**: Liquid
      - **Color**: Light yellow

---
40.1.1

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor:</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH-value at 20 °C (68 °F):</td>
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<tr>
<td>Flammability (solid, gaseous):</td>
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<tr>
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<tr>
<td>Decomposition temperature:</td>
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<td>Upper:</td>
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<td>Density:</td>
<td>Not determined</td>
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<td>Relative density:</td>
<td>Not determined</td>
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<td>Vapour density:</td>
<td>Not determined</td>
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<td>Evaporation rate:</td>
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</table>

**10 Stability and reactivity**

- **Reactivity**: No further relevant information available.
- **Chemical stability**: Stable at ambient temperature.
- **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**: No further relevant information available.
- **Incompatible materials**: No further relevant information available.
11 Toxicological information

- Hazardous decomposition products: No dangerous decomposition products known.

- Information on toxicological effects
  - Acute toxicity:
  - LD/LC50 values that are relevant for classification: No further relevant information available.
  - Primary irritant effect:
    - on the skin: Strong caustic effect on skin and mucous membranes.
    - on the eye: Strong caustic effect. Strong irritant with the danger of severe eye injury.
  - Sensitization: No sensitizing effects known.

- Additional toxicological information:
The product shows the following dangers according to internally approved calculation methods for preparations:
  - Corrosive

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    poly(acrylic acid) 3
  - NTP (National Toxicology Program)
    None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    None of the ingredients is listed.

- Carcinogenic categories' legend:
  - IARC Group 1: The agent is carcinogenic to humans.
  - IARC Group 2A: The agent is probably carcinogenic to humans.
  - IARC Group 2B: The agent is possibly carcinogenic to humans.
  - IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.
  - IARC Group 4: The agent is probably not carcinogenic to humans.
  - NTP K: Known to be human carcinogen.
  - NTP R: Reasonably anticipated to be human carcinogen.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.

- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.

- Additional ecological information:
  - General notes:
    - Water hazard class 1 (Self-assessment): slightly hazardous for water
    - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
    - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    - Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low
13 Disposal considerations

- Waste treatment methods
  - Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, ADR, ADN, IMDG, IATA: Void

- UN proper shipping name
  - DOT, ADR, ADN, IMDG, IATA: Void

- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA
    - Class: Void

- Packing group
  - DOT, ADR, IMDG, IATA: Void

- Environmental hazards:
  - Marine pollutant: No

- Special precautions for user: Not applicable.

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.

- UN "Model Regulation": -

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture

  - SARA (Superfund Amendments and Reauthorization Act)
    - Section 355 (extremely hazardous substances):
      - None of the ingredient is listed.
    - Section 313 (Specific toxic chemical listings):
      - None of the ingredients is listed.
Trade name: GC Fuji IX GP FAST (Liquid)

- **TSCA (Toxic Substances Control Act):**
  All ingredients are listed.

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**
  None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**
  None of the ingredients is listed.

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

- **GHS label elements**
  The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Signal word** Danger

- **Hazard-determining components of labeling:**
  polybasic carboxylic acid**

- **Hazard statements**
  Causes severe skin burns and eye damage.

- **Precautionary statements**
  Do not breathe dusts or mists.
  Wear eye protection / face protection.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Immediately call a poison center/doctor.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

---

**16 Other information**

- **Department issuing MSDS:** Regulatory Affairs
- **Contact:**
  Regulatory Affairs
  Telephone No. +1 (708) 597-0900
  sds@gcamerica.com
- **Date of preparation / last revision** 02/24/2015 / -
- **Abbreviations and acronyms:**
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  HCS: Hazard Communication Standard (USA)
  MSDS: Material Safety Data Sheet
  SDS: Safety Data Sheet
  ECHA: European Chemicals Agency
  OSHA: Occupational Safety and Health Administration (USA)
Trade name: GC Fuji IX GP FAST (Liquid)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Sources
- Manufacturers' MSDSs/SDSs
- TOXNET (http://toxnet.nlm.nih.gov/)
- ECHA (http://echa.europa.eu/)
- EnviChem (www.echemportal.org)

Notes:
CAS Registry Number is a Registered Trademark of the American Chemical Society.
CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.

* Data compared to the previous version altered. This version replaces all previous versions.

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1 Identification

- Product identifier
- Trade name: GC Fuji IX GP (Liquid)  
  GC Fuji IX GP CAPSULE (Liquid)

- Relevant identified uses of the substance or mixture and uses advised against
  Dental material
  The product is intended for professional use.
  To avoid risks for humans and environment obtain instructions.

- Application of the substance / the mixture
  Dental filling material

- Details of the supplier of the safety data sheet
  Manufacturer/Supplier:
  GC America Inc.
  3737 W. 127th Street
  Alsip, IL 60803
  USA
  sds@gcamerica.com

  - Information department: Regulatory Affairs
  - Emergency telephone number:
    During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
    Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

- Classification of the substance or mixture
  Skin Corr. 1A  H314  Causes severe skin burns and eye damage.
  Eye Dam. 1  H318  Causes serious eye damage.

- Additional information:
  The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s)
  in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating
  system is based entirely on the existence of the risk(s) and does not take into account the likelihood of
  reduced risk(s) through proper usage and handling.

- Label elements
  - GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    ![GHS05]

- Signal word Danger

- Hazard-determining components of labeling:
  polybasic carboxylic acid**

- Hazard statements
  Causes severe skin burns and eye damage.
Trade name: GC Fuji IX GP (Liquid)
GC Fuji IX GP CAPSULE (Liquid)

· Precautionary statements
  Do not breathe dusts or mists.
  Wear eye protection / face protection.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  Immediately call a poison center/doctor.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

· Classification system:
  · NFPA ratings (scale 0 - 4)

  Health = 2
  Fire = 0
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)

  HEALTH = 2
  FIRE = 0
  REACTIVITY = 0

· Other hazards
  · Results of PBT and vPvB assessment
  · PBT: Not applicable.
  · vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures
  · Description: Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:
  polybasic carboxylic acid** 5-10%

· Additional information:
  If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA’s Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

4 First-aid measures

· Description of first aid measures
  · General information:
    Immediately remove any clothing soiled by the product.
    If symptoms persist consult doctor.
  · After inhalation:
    Supply fresh air; consult doctor in case of complaints.
    In case of unconsciousness place patient stably in side position for transportation.
  · After skin contact:
    Immediately wash with water and soap and rinse thoroughly.
    Seek medical treatment.
· **After eye contact:**
  Protect unharmed eye.
  Rinse opened eye for several minutes under running water.
  Call a doctor immediately.

· **After swallowing:**
  Rinse out mouth and then drink plenty of water.
  If symptoms persist consult doctor.

· **Information for doctor:**
  Most important symptoms and effects, both acute and delayed
  No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**
  No further relevant information available.

## 5 Fire-fighting measures

· **Extinguishing media**
  Suitable extinguishing agents:
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:**
  Water with full jet

· **Special hazards arising from the substance or mixture**
  Formation of toxic gases is possible during heating or in case of fire.

· **Advice for firefighters**
  Protective equipment: Wear self-contained respiratory protective device.

· **Additional information**
  Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
  Remove persons from danger area.
  Avoid contact with the eyes and skin.
  Wear protective clothing.

· **Environmental precautions:**
  Do not allow product to reach sewage system or any water course.
  Do not allow to penetrate the ground/soil.

· **Methods and material for containment and cleaning up:**
  Use neutralizing agent.
  Absorb liquid components with liquid-binding material.
  Dispose of the collected material according to regulations.

· **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
7 Handling and storage

- **Handling:**
  - **Precautions for safe handling:**
    - Observe instructions for use.
    - Ensure good ventilation/exhaustion at the workplace.
    - Prevent formation of aerosols.
    - Avoid contact with the eyes and skin.
  - **Information about protection against explosions and fires:** No special measures required.

- **Storage:**
  - **Requirements to be met by storerooms and receptacles:**
    - Store only in unopened original receptacles.
  - **Information about storage in one common storage facility:** Store away from foodstuffs.
  - **Further information about storage conditions:**
    - Observe instructions for use/storage.
    - Keep receptacle tightly sealed.
  - **Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Control parameters**
  - **Components with limit values that require monitoring at the workplace:**
    - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  - **Additional information:** The lists that were valid during the creation were used as basis.

- **Exposure controls**
  - **Personal protective equipment:**
    - **General protective and hygienic measures:**
      - The usual precautionary measures for handling chemicals should be followed.
      - Avoid contact with the eyes and skin.
      - Wash hands before breaks and at the end of work.
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing.
    - **Breathing equipment:** Suitable respiratory protective device recommended.
    - **Protection of hands:** Protective gloves
    - **Material of gloves**
      - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
    - **Penetration time of glove material**
      - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
    - **Eye protection:** Safety glasses

(Contd. of page 3)
### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
  - **General Information**
  - **Appearance:**
    - Form: Fluid
    - Color: Light yellow
    - Odor: Odorless
    - Odor threshold: Not determined.
  - **pH-value at 20 °C (68 °F):** 1.9
  - **Change in condition**
    - Melting point/Melting range: Undetermined.
    - Boiling point/Boiling range: Undetermined.
  - **Flash point:** Not applicable.
  - **Flammability (solid, gaseous):** Not applicable.
  - **Ignition temperature:** Undetermined.
  - **Decomposition temperature:** Not determined.
  - **Auto igniting:** Product is not selfigniting.
  - **Danger of explosion:** Product does not present an explosion hazard.
  - **Explosion limits:**
    - Lower: Not determined.
    - Upper: Not determined.
  - **Vapor pressure:** Not determined.
  - **Density:** Not determined.
  - **Relative density:** Not determined.
  - **Vapour density:** Not determined.
  - **Evaporation rate:** Not determined.
  - **Solubility in / Miscibility with**
    - Water: Insoluble.
  - **Partition coefficient (n-octanol/water):** Not determined.
  - **Viscosity:**
    - Dynamic: Not determined.
    - Kinematic: Not determined.
  - **Solvent content:**
    - Organic solvents: 0.0 %
    - Water: 50.0 %
  - **Solids content:** 100.0 %
  - **Other information**
    - No further relevant information available.

### 10 Stability and reactivity

- **Reactivity** No further relevant information available.
· Chemical stability Stable at ambient temperature.
· Thermal decomposition / conditions to be avoided:
  No decomposition if used according to specifications.
· Possibility of hazardous reactions No dangerous reactions known.
· Conditions to avoid No further relevant information available.
· Incompatible materials: No further relevant information available.
· Hazardous decomposition products: No dangerous decomposition products known.

## 11 Toxicological information

### Information on toxicological effects

**Acute toxicity:**
· LD/LC50 values that are relevant for classification: No further relevant information available.

**Primary irritant effect:**
· on the skin: Strong caustic effect on skin and mucous membranes.
· on the eye:
  Strong caustic effect.
  Strong irritant with the danger of severe eye injury.
· Sensitization: No sensitizing effects known.

**Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
- Corrosive

### Carcinogenic categories

- **IARC (International Agency for Research on Cancer)**
  | poly(acrylic acid) | 3 |
- **NTP (National Toxicology Program)**
  None of the ingredients is listed.
- **OSHA-Ca (Occupational Safety & Health Administration)**
  None of the ingredients is listed.

### Carcinogenic categories' legend:
- IARC Group 1: The agent is carcinogenic to humans.
- IARC Group 2A: The agent is probably carcinogenic to humans.
- IARC Group 2B: The agent is possibly carcinogenic to humans.
- IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.
- IARC Group 4: The agent is probably not carcinogenic to humans.
- NTP K: Known to be human carcinogen.
- NTP R: Reasonably anticipated to be human carcinogen.

## 12 Ecological information

**Toxicity**
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
### 13 Disposal considerations

- **Waste treatment methods**
  - **Recommendation:**
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**
  - **Recommendation:**
    - Disposal must be made according to official regulations.

### 14 Transport information

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<td>Environmental hazards:</td>
<td>Marine pollutant:</td>
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</tr>
<tr>
<td>Special precautions for user</td>
<td>Not applicable.</td>
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<td>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</td>
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</tr>
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</table>
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - SARA (Superfund Amendments and Reauthorization Act)
  - Section 355 (extremely hazardous substances):
    None of the ingredient is listed.
  - Section 313 (Specific toxic chemical listings):
    None of the ingredients is listed.
  - TSCA (Toxic Substances Control Act):
    All ingredients are listed.

- Carcinogenic categories
  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH)
    None of the ingredients is listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.

- GHS label elements
  The product is classified and labeled according to the Globally Harmonized System (GHS).

- Hazard pictograms
  
  ![GHS05]

- Signal word Danger

- Hazard-determining components of labeling:
  polybasic carboxylic acid**

- Hazard statements
  Causes severe skin burns and eye damage.

- Precautionary statements
  Do not breathe dusts or mists.
  Wear eye protection / face protection.
  If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy
to do. Continue rinsing.
  Immediately call a poison center/doctor.
  Store locked up.
  Dispose of contents/container in accordance with local/regional/national/international regulations.

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

- Department issuing MSDS: Regulatory Affairs
Trade name: GC Fuji IX GP (Liquid)
GC Fuji IX GP CAPSULE (Liquid)

- **Contact:**
  Regulatory Affairs
  Telephone No. +1 (708) 597-0900
  sds@gcamerica.com

- **Date of preparation / last revision** 02/24/2015 / -

- **Abbreviations and acronyms:**
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  HCS: Hazard Communication Standard (USA)
  MSDS: Material Safety Data Sheet
  SDS: Safety Data Sheet
  ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)
  ECHA: European Chemicals Agency
  OSHA: Occupational Safety and Health Administration (USA)
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  Skin Corr. 1A: Skin corrosion/irritation, Hazard Category 1A
  Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

- **Sources**
  - Manufacturers' MSDS/SDSs
  - TOXNET (http://toxnet.nlm.nih.gov/)
  - ECHA (http://echa.europa.eu/)
  - EnviChem (www.echemportal.org)

- **Notes:**
  CAS Registry Number is a Registered Trademark of the American Chemical Society.
  CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.

- *** Data compared to the previous version altered.** This version replaces all previous versions.

- **Disclaimer:**
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1 Identification

· **Product identifier**
  · **Trade name**: GC Fuji IX GP (Powder, Shade: A2)
    GC Fuji IX GP CAPSULE (Powder, Shades: A2, A3, A3.5, B2, and B3)

· **Relevant identified uses of the substance or mixture and uses advised against**
  - Dental material
  - The product is intended for professional use.
  - To avoid risks for humans and environment obtain instructions.

· **Application of the substance / the mixture**
  - Dental filling material

· **Details of the supplier of the safety data sheet**
  · **Manufacturer/Supplier**: GC America Inc.
    3737 W. 127th Street
    Alsip, IL 60803
    USA
    sds@gcamerica.com

  · **Information department**: Regulatory Affairs

  · **Emergency telephone number**: 
    During normal opening times (Mon.-Fri. 8:00 AM-5:00 PM CST): +1 (708) 597-0900
    Transportation (CHEMTREC®) Emergency Telephone No. +1 (800) 424-9300

2 Hazard(s) identification

· **Classification of the substance or mixture**
  - The product is not classified according to the Globally Harmonized System (GHS).

· **Additional information:**
  - The information provided is in regards to the toxicity and hazard rating(s) of the individual component(s) in the formulation. The associated risk(s) depends on the route(s) of exposure. The hazard rating system is based entirely on the existence of the risk(s) and does not take into account the likelihood of reduced risk(s) through proper usage and handling.

· **Label elements**
  · **GHS label elements**: Void
  · **Hazard pictograms**: Void
  · **Signal word**: Void
  · **Hazard statements**: Void
  · **Classification system**: 
    · **NFPA ratings (scale 0 - 4)**
      - Health = 0
      - Fire = 0
      - Reactivity = 0
    · **HMIS-ratings (scale 0 - 4)**
      - Health = 0
      - Fire = 0
      - Reactivity = 0

(Contd. on page 2)
Trade name: GC Fuji IX GP (Powder, Shade: A2)  
GC Fuji IX GP CAPSULE (Powder, Shades: A2, A3, A3.5, B2, and B3)

3 Composition/information on ingredients

- Chemical characterization: Mixtures
- Description: Mixture of the substances listed below with nonhazardous additions.
- Dangerous components: Void
- Additional information: If a substance is marked with **, then substance is a trade secret. This is allowed under OSHA’s Hazard Communication Standard (HCS) as a trade secret and under GHS as Confidential Business Information (CBI).

4 First-aid measures

- Description of first aid measures
  - General information:
    No special measures required.
    If symptoms persist consult doctor.
  - After inhalation:
    Supply fresh air; consult doctor in case of complaints.
    In case of unconsciousness place patient stably in side position for transportation.
  - After skin contact:
    Rinse with warm water.
    If symptoms persist consult doctor.
  - After eye contact:
    Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing:
    Rinse out mouth and then drink plenty of water.
    If symptoms persist consult doctor.
  - Information for doctor:
    - Most important symptoms and effects, both acute and delayed
      No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed
      No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
  - Suitable extinguishing agents:
    CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
    Use fire fighting measures that suit the environment.
  - For safety reasons unsuitable extinguishing agents: Water with full jet
  - Special hazards arising from the substance or mixture
    Formation of toxic gases is possible during heating or in case of fire.
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Remove persons from danger area.
- Environmental precautions:
  Do not allow product to reach sewage system or any water course.
  Inform respective authorities in case of seepage into water course or sewage system.
  Do not allow to penetrate the ground/soil.
  In case of seepage into the ground inform responsible authorities.
- Methods and material for containment and cleaning up:
  Pick up mechanically.
  Dispose of the collected material according to regulations.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
- Precautions for safe handling
  Observe instructions for use.
  Prevent formation of dust.
  Any deposit of dust which cannot be avoided must be regularly removed.
- Information about protection against explosions and fires:
  Dust can combine with air to form an explosive mixture.
- Storage:
  Requirements to be met by storerooms and receptacles:
  Store only in unopened original receptacles.
  Information about storage in one common storage facility: Store away from foodstuffs.
  Further information about storage conditions: Observe instructions for use / storage.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
  Components with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
  Additional information: The lists that were valid during the creation were used as basis.
Exposure controls

Personal protective equipment:

General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
Do not inhale dust / smoke / mist.
Wash hands before breaks and at the end of work.

Breathing equipment: Suitable respiratory protective device recommended.

Protection of hands: Protective gloves

Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Safety glasses

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:
   Form: Powder
   Color: White
   Odor: Odorless
   Odor threshold: Not determined.

pH-value: Not applicable.

Change in condition
   Melting point/Melting range: Undetermined.
   Boiling point/Boiling range: Undetermined.

Flash point: Not applicable.

Flammability (solid, gaseous): Not determined.

Ignition temperature: Undetermined.

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Explosion limits:
   Lower: Not determined.
   Upper: Not determined.

Vapor pressure: Not applicable.

Density: Not determined.

Relative density: Not determined.
Trade name: GC Fuji IX GP (Powder, Shade: A2)
GC Fuji IX GP CAPSULE (Powder, Shades: A2, A3, A3.5, B2, and B3)

10 Stability and reactivity

- Reactivity: No further relevant information available.
- Chemical stability: Stable at ambient temperature.
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
  - LD/LC50 values that are relevant for classification: No further relevant information available.
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: No irritating effect.
  - Sensitization: No sensitizing effects known.
  - Additional toxicological information: The product is not subject to classification according to internally approved calculation methods for preparations.

- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    - poly(acrylic acid): 3
  - NTP (National Toxicology Program)
    - None of the ingredients is listed.
  - OSHA-Ca (Occupational Safety & Health Administration)
    - None of the ingredients is listed.
Trade name: GC Fuji IX GP (Powder, Shade: A2)
GC Fuji IX GP CAPSULE (Powder, Shades: A2, A3, A3.5, B2, and B3)

· Carcinogenic categories’ legend:
  IARC Group 1: The agent is carcinogenic to humans.
  IARC Group 2A: The agent is probably carcinogenic to humans.
  IARC Group 2B: The agent is possibly carcinogenic to humans.
  IARC Group 3: The agent is not classifiable as to its carcinogenicity to humans.
  IARC Group 4: The agent is probably not carcinogenic to humans.
  NTP K: Known to be human carcinogen.
  NTP R: Reasonably anticipated to be human carcinogen.

12 Ecological information

· Toxicity
  · Aquatic toxicity: No further relevant information available.
  · Persistence and degradability No further relevant information available.
· Behavior in environmental systems:
  · Bioaccumulative potential No further relevant information available.
  · Mobility in soil No further relevant information available.
· Additional ecological information:
  · General notes:
    Water hazard class 3 (Self-assessment): extremely hazardous for water
    Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    Danger to drinking water if even extremely small quantities leak into the ground.
  · Results of PBT and vPvB assessment
    · PBT: Not applicable.
    · vPvB: Not applicable.
    · Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods
  · Recommendation: Smaller quantities can be disposed of with household waste.
· Uncleaned packagings:
  · Recommendation: Disposal must be made according to official regulations.

14 Transport information

· UN-Number
  · DOT, ADR, ADN, IMDG, IATA Void
· UN proper shipping name
  · DOT, ADR, ADN, IMDG, IATA Void
· Transport hazard class(es)
  · DOT, ADR, ADN, IMDG, IATA Void
  · Class Void
· Packing group
  · DOT, ADR, IMDG, IATA Void
15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - SARA (Superfund Amendments and Reauthorization Act)
    - Section 355 (extremely hazardous substances):
      None of the ingredient is listed.
    - Section 313 (Specific toxic chemical listings):
      None of the ingredients is listed.
  - TSCA (Toxic Substances Control Act):
    All ingredients are listed.
- Carcinogenic categories

  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH)
    None of the ingredients is listed.
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.
- GHS label elements Void
- Hazard pictograms Void
- Signal word Void
- Hazard statements Void
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

- Department issuing MSDS: Regulatory Affairs
- Contact:
  Regulatory Affairs
  Telephone No. +1 (708) 597-0900
  sds@gcamerica.com
- Date of preparation / last revision 02/24/2015 / -
- Abbreviations and acronyms:
  GHS: Globally Harmonized System of Classification and Labelling of Chemicals
  HCS: Hazard Communication Standard (USA)
  MSDS: Material Safety Data Sheet
  SDS: Safety Data Sheet
Trade name: GC Fuji IX GP (Powder, Shade: A2)
GC Fuji IX GP CAPSULE (Powder, Shades: A2, A3, A3.5, B2, and B3)

ADN: Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways)
ECHA: European Chemicals Agency
OSHA: Occupational Safety and Health Administration (USA)
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

Sources
- Manufacturers’ MSDSs/SDSs
- TOXNET (http://toxnet.nlm.nih.gov/)
- ECHA (http://echa.europa.eu/)
- EnviChem (www.echemportal.org)

Notes:
CAS Registry Number is a Registered Trademark of the American Chemical Society.
CHEMTREC® is a registered service mark of the American Chemistry Council, Inc.

* Data compared to the previous version altered. This version replaces all previous versions.

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**SECTION 1: Identification**

1.1. Product identifier

3M™ ESPE™ IMPREGUM F Catalyst

Product Identification Numbers

70-2011-3765-3

1.2. Recommended use and restrictions on use

**Recommended use**

Dental Product, Impression material

**Restrictions on use**

For use only by dental professionals

1.3. Supplier’s details

**MANUFACTURER:**

3M

**DIVISION:**

Oral Care Solutions Division

**ADDRESS:**

3M Center, St. Paul, MN 55144-1000, USA

**Telephone:**

1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

**SECTION 2: Hazard identification**

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

Specific Target Organ Toxicity (central nervous system): Category 3.

2.2. Label elements

**Signal word**

Warning

**Symbols**
Hazard Statements
Causes eye irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
Use only in a well-ventilated area.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
If eye irritation persists: Get medical advice/attention.
Call a POISON CENTER or doctor/physician if you feel unwell.

Storage:
Store in a well-ventilated place. Keep container tightly closed.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

2.3. Hazards not otherwise classified
None.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITRIC ESTER</td>
<td>77-90-7</td>
<td>30 - 40 Trade Secret *</td>
</tr>
<tr>
<td>SULFONIUM SALT</td>
<td>72140-65-9</td>
<td>30 - 40 Trade Secret *</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>68909-20-6</td>
<td>15 - 25 Trade Secret *</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>68855-54-9</td>
<td>5 - 10 Trade Secret *</td>
</tr>
<tr>
<td>POLYETHYLENE-POLYPROPYLENE GLYCOL</td>
<td>9003-11-6</td>
<td>5 - 10 Trade Secret *</td>
</tr>
</tbody>
</table>

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air. If you feel unwell, get medical attention.
**Skin Contact:**  
Wash with soap and water. If signs/symptoms develop, get medical attention.

**Eye Contact:**  
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

**If Swallowed:**  
Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed  
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required  
Not applicable

### SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media  
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture  
None inherent in this product.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Irritant Vapors or Gases</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

5.3. Special protective actions for fire-fighters  
No special protective actions for fire-fighters are anticipated.

### SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures  
Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions  
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up  
Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

### SECTION 7: Handling and storage

7.1. Precautions for safe handling  
Avoid prolonged or repeated skin contact. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)
7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls
Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
See Section 7.1 for additional information on skin protection.

Respiratory protection
Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Physical Form:</td>
<td>Solid</td>
</tr>
<tr>
<td>Specific Physical Form:</td>
<td>Paste</td>
</tr>
<tr>
<td>Odor, Color, Grade:</td>
<td>slightly acrid odor, dark red paste</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No Data Available</td>
</tr>
<tr>
<td>pH</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Flash point &gt; 93 °C (200 °F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not Classified</td>
</tr>
<tr>
<td>Flammable Limits(LEL)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits(UEL)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Density</td>
<td>1.1 - 1.4 g/cm³ [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>&gt; 1  [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Negligible</td>
</tr>
<tr>
<td>Solubility- non-water</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/ water</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>
Autoignition temperature: No Data Available
Decomposition temperature: No Data Available
Viscosity: No Data Available
Volatile Organic Compounds: No Data Available
Percent volatile: No Data Available
VOC Less H2O & Exempt Solvents: No Data Available

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Strong acids
Strong bases
Strong oxidizing agents

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td></td>
</tr>
</tbody>
</table>

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure. The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
This product may have a characteristic odor; however, no adverse health effects are anticipated.

**Skin Contact:**
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

**Eye Contact:**
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May cause additional health effects (see below).

**Additional Health Effects:**

**Single exposure may cause target organ effects:**
Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Carcinogenicity:**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Class Description</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILICA, CRYSTALAIRRESP</td>
<td>68855-54-9</td>
<td>Grp. 1: Carcinogenic to humans</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>SILICA, CRYSTALAIRRESP</td>
<td>68855-54-9</td>
<td>Known human carcinogen</td>
<td>National Toxicology Program Carcinogens</td>
</tr>
</tbody>
</table>

**Toxicological Data**

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

**Acute Toxicity**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Dermal</td>
<td>No data available; calculated ATE &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td>No data available; calculated ATE &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>SULFONIUM SALT</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>SULFONIUM SALT</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>CITRIC ESTER</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>CITRIC ESTER</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 25,000 mg/kg</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 0.691 mg/l</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 5,110 mg/kg</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 2.7 mg/l</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>POLYETHYLENE-POLYPROPYLENE GLYCOL</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>POLYETHYLENE-POLYPROPYLENE GLYCOL</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 5,700 mg/kg</td>
</tr>
</tbody>
</table>
ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFONIUM SALT</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>SILANE TREATEAD SILICA</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>In vitro data</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

**Serious Eye Damage/Irritation**

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFONIUM SALT</td>
<td>similar health hazards</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>SILANE TREATEAD SILICA</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
</tbody>
</table>

**Skin Sensitization**

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILANE TREATEAD SILICA</td>
<td>Human and animal</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Mouse</td>
<td>Not sensitizing</td>
</tr>
</tbody>
</table>

**Respiratory Sensitization**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**Germ Cell Mutagenicity**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFONIUM SALT</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>SILANE TREATEAD SILICA</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

**Carcinogenicity**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILANE TREATEAD SILICA</td>
<td>Not Specified</td>
<td>Mouse</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation</td>
<td>Human and animal</td>
<td>Carcinogenic</td>
</tr>
</tbody>
</table>

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILANE TREATEAD SILICA</td>
<td>Ingestion</td>
<td>Not toxic to female reproduction</td>
<td>Rat</td>
<td>NOAEL 509 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>SILANE TREATEAD SILICA</td>
<td>Ingestion</td>
<td>Not toxic to male reproduction</td>
<td>Rat</td>
<td>NOAEL 497 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>SILANE TREATEAD SILICA</td>
<td>Ingestion</td>
<td>Not toxic to development</td>
<td>Rat</td>
<td>NOAEL 1,350 mg/kg/day</td>
<td>during organogenesis</td>
</tr>
</tbody>
</table>

**Target Organ(s)**

Specific Target Organ Toxicity - single exposure
<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SULFONIUM SALT</td>
<td>Ingestion</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td>Rat</td>
<td>LOAEL 2,000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

**Specific Target Organ Toxicity - repeated exposure**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>All data are negative</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Inhalation</td>
<td>silicosis</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>Ingestion</td>
<td>hematopoietic system</td>
<td>All data are negative</td>
<td>Rat</td>
<td>NOAEL 3,738 mg/kg/day</td>
<td>90 days</td>
</tr>
</tbody>
</table>

**Aspiration Hazard**
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

**SECTION 12: Ecological information**

Ecotoxicological information
Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information
Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

**SECTION 13: Disposal considerations**

13.1. Disposal methods
Dispose of contents/container in accordance with the local/regional/national/international regulations.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

EPA Hazardous Waste Number (RCRA): Not regulated

**SECTION 14: Transport Information**

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

**SECTION 15: Regulatory information**

15.1. US Federal Regulations
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - No  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - No

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.
Contact 3M for more information.

15.4. International Regulations
Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification
Health: 1 Flammability: 1 Instability: 0 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Document Group: 16-2599-5  Version Number: 8.00
Issue Date: 02/25/16  Supercedes Date: 02/11/15

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3M USA SDSs are available at www.3M.com
SECTION 1: Identification of the substance/preparation and of the company / undertaking

(a) GHS product identifier

Tecstone, Fastone, Tecstone FL, Labstone, Orthostone, Mounting Stone, Flaking Stone, Flask-It!, Apex, Natural Rock, Veri-Die, Veri-Die 20, Excalibur, X-Rock, Express Set, Cadscan, Pristine, Plaster, and OrthoPlaster (All Colors)

(e) Emergency phone number

CHEMTRAC 1-800-424-9300

(b) Other means of identification

NA

(c) Recommended use of the chemical and restrictions on use

For professional dental applications.

(d) Supplier’s details

Garreco, LLC.
430 Hiram Road
Heber Springs, AR 72543
Phone: 1-800-334-1443

SECTION 2: Hazards identification

(a) GHS classification of the substance/mixture

Substance Name
1. Undisclosed due to Confidential Business Information ND
2. Crystalline Silica ND

- IARC - International Agency for Research on Cancer: 1- Carcinogenic to humans;
- NTP National Toxicology Program (Health and Human Services Dept., Public Health Service, NIH/NIEHS): 1- Known to be carcinogen
- ACGIH American Conference of Governmental Industrial Hygienists: A2 Suspected human carcinogen
- CAL-65: Listed as Chemical known to the State of California to Cause Cancer

(b) Label Elements

Hazard statements
None

Precautionary statements
None

Hazard Symbol(s)
NONE

Signal Word(s)
NONE

(c) Other hazards which do not result in classification

IF ON SKIN: This material hardens and slowly becomes hot when mixed with water. Therefore, it SHOULD NOT be used to make a cast enclosing any part of the body. Failure to follow these instructions can cause severe burns that may require surgical removal of affected tissue or amputation of limb. Direct, prolonged or repeated contact with the skin may cause irritation and rubbing against the skin can result in abrasions.

IF INHALED: Dusts from this product may irritate the nose, throat, lungs, and upper respiratory tract. Persons subject to large amounts of this dust will be forced to leave area because of nuisance conditions such as coughing, sneezing, and nasal irritation. Labored breathing may occur after excessive inhalation.

IF SWALLOWED: Unlikely to occur, but may cause gastric disturbances if swallowed. The materials are non-toxic, however, ingestion of a sufficient quantity could lead to mechanical obstruction of the gut, especially the pyloric region.

IF IN EYES: Direct Contact can cause mechanical irritation of eyes.

SECTION 3: Composition/information on ingredients
SECTION 4: First-aid measures

(a) Description of first aid measures:

IF ON SKIN (or hair): Rinse with water until free of material to avoid abrasions, then wash skin thoroughly with mild soap and water. May dry skin.

IF INHALED: If respiratory symptoms persist, consult physician.

IF SWALLOWED: If gastric disturbance occurs, consult physician.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Direct Contact can cause mechanical irritation of eyes. If burning, redness, itching, pain or other symptoms persist or develop, consult a physician.

(b) Most important symptoms and effects, both acute and delayed:

IF INHALED: Nuisance conditions such as coughing, sneezing, and nasal irritation. Labored breathing may occur after excessive inhalation.

IN EYES: If burning, redness, itching, pain or other symptoms persist or develop, consult a physician.

(c) Indication of any immediate medical attention and special treatment needed:

ND

SECTION 5: Fire-fighting measures

(a) Suitable extinguishing media:

Water or use extinguishing media appropriate for surrounding fire.

(b) Special hazards arising from the chemical or mixture:

None known

(c) Special protective equipment and precautions for fire-fighters:

Wear appropriate personal protective equipment.

SECTION 6: Accidental release measures

(a) Personal precautions, protective equipment and emergency procedures:

No special precautions. Wear appropriate personal protective equipment.

(b) Environmental precautions:

Toxicity studies performed with fish, aquatic invertebrates and aquatic plants showed no toxic effect.

(c) Methods and material for containment and cleaning up:

Remove by dry-sweeping or vacuum. Avoid creating excessive dust. Do not wash down drains since it could plug drains. Wear protective equipment.
SECTION 7: Handling and storage

(a) Precautions for safe handling:

This product can release nuisance dust in handling or during use. Eye, skin, nose, throat, and upper respiratory irritation may occur with prolonged dust exposures.

(b) Conditions for safe storage, including any incompatibilities:

Store in a dry area to minimize potential for clumping due to moisture absorption. Dew point conditions or other conditions causing presence of moisture will harden product during storage.

SECTION 8: Exposure controls/Personal protection

(a) Control parameters:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBI</td>
<td>10 mg/m³</td>
<td>15 mg/m³ total, 5 mg/m³ respirable</td>
</tr>
<tr>
<td>Crystalline Silica</td>
<td>0.1 mg/m³ respirable</td>
<td>0.1 mg/m³ respirable</td>
</tr>
</tbody>
</table>

(b) Appropriate Engineering Controls:

Ventilate to keep exposures below TLV requirements of the individual ingredients. General ventilation is expected to be satisfactory. Use local exhaust ventilation if necessary to control dust.

(c) Individual protection measures:

RESPIRATORY: None required where adequate ventilation conditions exist. In order to meet TLV requirements of individual ingredients and to control dusting conditions, provide general ventilation and local exhaust ventilation. Avoid creating dust. Wear a NIOSH/OSHA approved dust respirator in poorly ventilated areas and/or if TLV requirements of the individual ingredients is exceeded.

OTHER PROTECTIVE EQUIPMENT: No special body protection is required under typical circumstances of use and handling. If necessary, refer to appropriate governing standards. An eyewash station and a safety shower are recommended.

SECTION 9: Physical and chemical properties

(a) Appearance: White to off-white powder
(b) Odor: None
(c) Odor threshold: ND
(d) pH: 7.5 - 8.5
(e) Melting point / freezing point: 1,450 Degrees Celsius
(f) Initial boiling point and boiling range: ND
(g) Flash point: Not Combustible
(h) Evaporation rate (BuAc=1): ND
(i) Flammability: ND
(j) Upper/lower flammability or explosive limits: ND
(k) Vapor Pressure: ND
(l) Vapor density: ND
(m) Relative density: ND
(n) Solubility: ND
(o) Partition coefficient: n-octanol/water: ND
(p) Auto-ignition temperature: ND
(q) Decomposition temperature: 1,450 Degrees Celsius
(r) Viscosity: ND
### SECTION 10: Stability and reactivity

(a) Reactivity: Low, HMIS 0
(b) Chemical stability: Stable
(c) Possibility of hazardous reactions: Low
(d) Conditions to avoid: Incompatible with Acids
(f) Hazardous decomposition products: Decomposes to Calcium Oxide and Sulfur Dioxide at 1,450 Degrees Celsius

### SECTION 11: Toxicological information

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>NE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>NE</td>
</tr>
<tr>
<td>Serious Eye Damage / Irritation</td>
<td>NE</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>NE</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>NE</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>NE</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>NE</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>NE</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>NE</td>
</tr>
</tbody>
</table>

### Aspiration Hazard

<table>
<thead>
<tr>
<th>Exposure route:</th>
<th>inhalation, skin and/or eye contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptoms related to the physical, chemical and toxicological characteristics:</td>
<td>difficulty breathing, rashes or irritations</td>
</tr>
<tr>
<td>Delayed and immediate effects and also chronic effects from short and long term exposure:</td>
<td>difficulty breathing, rashes or irritations</td>
</tr>
<tr>
<td>Numerical measures of toxicity:</td>
<td>See control parameters above</td>
</tr>
</tbody>
</table>

### SECTION 12: Ecological information

<table>
<thead>
<tr>
<th>Ecotoxicity:</th>
<th>ND</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability:</td>
<td>ND</td>
</tr>
<tr>
<td>Bioaccumulative potential</td>
<td>ND</td>
</tr>
<tr>
<td>Mobility in soil:</td>
<td>ND</td>
</tr>
<tr>
<td>Other adverse effects:</td>
<td></td>
</tr>
</tbody>
</table>

### SECTION 13: Disposal considerations

#### Product:

**Recommendation**

Sweep and dispose of material in accordance with all applicable federal, state and local regulations.
### SECTION 14: Transport information

<table>
<thead>
<tr>
<th>(a) UN Number</th>
<th>This product is not regulated as a hazardous material by neither the United States (DOT) Transportation regulations nor Canadian Transportation of Dangerous Goods.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(b) UN Proper shipping name</td>
<td>NA</td>
</tr>
<tr>
<td>(c) Transport hazard class(es)</td>
<td>NA</td>
</tr>
<tr>
<td>(d) Packing Group</td>
<td>NA</td>
</tr>
<tr>
<td>(e) Environmental hazards</td>
<td>NA</td>
</tr>
<tr>
<td>(f) Transport in bulk</td>
<td>NA</td>
</tr>
<tr>
<td>(g) Other Information</td>
<td>NA</td>
</tr>
</tbody>
</table>

### SECTION 15: Regulatory information

| SARA Reporting Requirements: | NA |
| SARA Threshold Planning Quantity: | NA |
| TSCA Inventory Status: | ND |
| Other Federal Requirements: | NA |
| Other Canadian Regulations: | NA |
| State Regulatory Information: | NA |
HAZARDOUS MATERIAL IDENTIFICATION (HMIS) RATING:

Health  0
Flammability  0
Reactivity  0
Other  NA

REVISION NUMBER: 140522

CHANGES FROM PREVIOUS VERSION: SECOND VERSION
MADE FORMAT CORRECTIONS

ABBREVIATIONS

NA Not Applicable  LD Lethal Dose
ND Not Determined  TC Toxic Concentration
NE Not Established  TD Toxic Dose
ppm parts per million  BOD Biological Oxygen Demand
G Gallon  COD Chemical Oxygen Demand
mg Milligram  Lo Lowest
L Liter  ThOD Theoretical Oxygen Demand
gm Gram  Tlm Threshold Limit
mol Mole  IC Inhibitory Concentration
kg Kilogram  DOC Dissolved Organic Carbon
μ Micro  H Hours
mm Millimeter  M Months
p Pico  D Days
Pa Pascals  Y Years
c cento  W Weeks
LC Lethal Concentration

ACGIH American Conference of Governmental Industrial Hygienist  
CPR Controlled Products Regulation
DSL Canadian Domestic Substances List
NDSDL Canadian Non-domestic Substance List
IARC International Agency for Research for Cancer
NOEL No Observed Effect Level
NOAEL No Observed Adverse Effect Level
OSHA Occupational Safety and Health Administration
PEL Permissible Exposure Limit
TLV Threshold Limit Value
SECTION 16: Other information

THIS MATERIAL SAFETY DATA SHEET IS PREPARED IN COMPLIANCE WITH FEDERAL REGULATIONS (29 CFR 1910.1200) OF CHEMICALS AND THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING REVISION 5. ANY APPLICABLE STATE AND LOCAL REGULATIONS SHOULD BE CONSULTED.

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SAFETY DATA SHEET

Material Name: POLIDENT FOR PARTIALS
Synonym(s): MFC 51039 GEU * SODIUM PERCARBONATE, MIXTURE
Recommended Use: Medical Device

Supplier Details:
GlaxoSmithKline UK
980 Great West Road
Brentford, Middlesex TW8 9GS  UK
UK General Information (normal business hours): +44-20-8047-5000

GlaxoSmithKline US
5 Moore Drive
Research Triangle Park, NC  27709 USA
US General Information (normal business hours): +1-888-825-5249

Email Address: msds@gsk.com
Website: www.gsk.com

EMERGENCY PHONE NUMBERS -

TRANSPORT EMERGENCIES (by country / geographic region):
Africa / EU / Israel / Middle East (English / European languages): +44 (0) 1235 239 670
Asia Pacific (except China): +65 3158 1074
China: +86 10 5100 3039
Middle East / Africa (Arabic-speaking countries): +44 (0) 1235 239 671
US: +1 703 527 3887
available 24 hrs/7 days; multi-language response

MEDICAL EMERGENCIES: +1 612 221 3999, Ext 221
available 24 hrs/7 days; multi-language response

2. HAZARD IDENTIFICATION

Globally Harmonised System Classification & Labelling
Classification:
Acute oral toxicity Category 4
Serious eye damage/eye irritation Category 2

Hazard Symbol(s):

Signal Word(s): Warning
Hazard Statement(s):
Harmful if swallowed. Causes serious eye irritation.
Precautionary Statement(s):
Wash hands thoroughly after handling. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. If skin irritation or rash occurs: Get medical advice/attention. Keep out of reach of children. Dispose of contents/container in accordance with local regulation.
Other Hazards

Fire and Explosion
Expected to be non-combustible.

Health
Exposure might occur via inhalation; ingestion; skin; eyes. Allergic skin reactions might occur following repeated contact with this material in susceptible individuals. Marked irritation might occur following repeated skin contact. Health effects information is based on hazards of components.

Environment
No information is available about the potential of this material to produce adverse environmental effects.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>CAS #</th>
<th>Percent</th>
<th>EC-No.</th>
<th>EU Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITRIC ACID ANHYDROUS</td>
<td>77-92-9</td>
<td>20</td>
<td>201-069-1</td>
<td>Xi, R36</td>
</tr>
<tr>
<td>POTASSIUM CAROATE</td>
<td>70693-62-8</td>
<td>12</td>
<td>274-778-7</td>
<td>C, Xn, R22, R34, R52</td>
</tr>
<tr>
<td>SODIUM BENZOATE</td>
<td>532-32-1</td>
<td>2.5</td>
<td>208-534-8</td>
<td>Xi, R36/37/38</td>
</tr>
<tr>
<td>SODIUM CARBONATE</td>
<td>497-19-8</td>
<td>9.6</td>
<td>207-838-8</td>
<td>Xi, R36</td>
</tr>
<tr>
<td>SODIUM LAURYL SULFOACETATE</td>
<td>1847-58-1</td>
<td>1.5</td>
<td>217-431-7</td>
<td>Xn, R22</td>
</tr>
<tr>
<td>SODIUM NITRITE</td>
<td>7632-00-0</td>
<td>0.2</td>
<td>231-555-9</td>
<td>T, O, N, R25, R50, R8</td>
</tr>
<tr>
<td>SODIUM PERCARBONATE</td>
<td>15630-89-4</td>
<td>8</td>
<td>239-707-6</td>
<td>Xi, Xn, O, R22, R41, R8</td>
</tr>
<tr>
<td>Other components below reportable levels</td>
<td>46.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. FIRST-AID MEASURES

Ingestion
Never attempt to induce vomiting. Do not attempt to give any solid or liquid by mouth if the exposed subject is unconscious or semi-conscious. Wash out the mouth with water. If the exposed subject is fully conscious, give plenty of water to drink. Obtain medical attention.

Inhalation
Physical form suggests that risk of inhalation exposure is negligible.

Skin contact
Using appropriate personal protective equipment, remove contaminated clothing and flush exposed area with large amounts of water. Obtain medical attention if skin reaction occurs, which may be immediate or delayed.

Eye contact
Wash immediately with clean and gently flowing water. Continue for at least 15 minutes. Obtain medical attention.

NOTES TO HEALTH PROFESSIONALS

Medical Treatment
Because of the potential for acute or delayed eye damage, consider referral to an ophthalmologist. Treat according to locally accepted protocols. For additional guidance, refer to the local poison control information centre.

Medical Conditions Caused or Aggravated by Exposure
None for occupational exposure.

Antidotes
No specific antidotes are recommended.

5. FIRE-FIGHTING MEASURES

Fire and Explosion Hazards
Not expected for the product, although the packaging is combustible.

Suitable Extinguishing Media
Water, dry powder or foam extinguishers are recommended. Carbon dioxide extinguishers may be ineffective.
6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**

Fence or cordon the affected area and do not allow individuals to touch or walk through the spilled material unless wearing appropriate protective clothing. Avoid dust generation.

**Environmental Precautions**

Prevent entry into waterways, sewers, surface drainage systems and poorly ventilated areas. If spill is outdoors, cover with plastic sheet to minimise spreading or contact with rain.

**Clean-up Methods**

Collect and place it in a suitable, properly labelled container for recovery or disposal. After all solid or absorbent material has been collected, the area should be vacuumed with HEPA filter-equipped apparatus.

**Decontamination Procedures**

No specific decontamination or detoxification procedures have been identified for this material. Consider use of water, detergent solutions, or other soluble solvents (if specified in Section 9 of this SDS), for clean-up and decontamination operations.

7. HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING**

**General Requirements**

Avoid breaking or crushing tablets.

**CONDITIONS FOR SAFE STORAGE**

No storage requirements necessary for occupational hazards. Follow product information storage instructions to maintain efficacy.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**OCCUPATIONAL EXPOSURE LIMITS**

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>GSK Occupational Hazard Category</th>
<th>GSK Occupational Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITRIC ACID ANHYDROUS</td>
<td>1</td>
<td>5000 mcg/m3 (8 HR TWA)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>GSK Occupational Hazard Category</th>
<th>GSK Occupational Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM BENZOATE</td>
<td>1</td>
<td>5000 MCG/M3 (8 HR TWA)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>GSK Occupational Hazard Category</th>
<th>GSK Occupational Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM CARBONATE</td>
<td>1</td>
<td>5000 mcg/m3 (8 HR TWA)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INGREDIENT</th>
<th>GSK Occupational Hazard Category</th>
<th>GSK Occupational Exposure Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SODIUM LAURYL SULFOACETATE</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**PERSONAL PROTECTIVE EQUIPMENT**

**Eye Protection**

Wear approved safety glasses with side shields if eye contact is possible.

**Other Equipment or Procedures**

Follow all local regulations if personal protective equipment (PPE) is used in the workplace. Wear appropriate clothing to avoid skin contact. Wash hands and arms thoroughly after handling. An eye wash station should be available.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
- Physical Form: Tablet.

10. STABILITY AND REACTIVITY

Chemical Stability: This product is expected to be stable.
Conditions to Avoid: None for normal handling of this product.

11. TOXICOLOGY INFORMATION

Target Organ Effects: No specific target organ effects have been identified.
Routes of Exposure
- Oral Toxicity: Ingestion may lead to irritation of the throat and difficulty breathing.
- Inhalation Toxicity: No studies have been conducted.
- Skin Effects: Marked irritation might occur following repeated skin contact.
- Eye Effects: Severe irritation might occur following direct contact with eyes. May cause intense reddening, swelling and pain with possible irreversible damage to vision.
- Sensitisation: Allergic skin reactions might occur following repeated contact with this material in susceptible individuals.

Genetic Toxicity: Not expected to be genotoxic under occupational exposure conditions.
Carcinogenicity: No components are listed as carcinogens by GSK, IARC, NTP or US OSHA.
Reproductive Effects: Not expected to produce adverse effects on fertility or development under occupational exposure conditions.
Other Adverse Effects: None known for occupational exposure.

12. ECOLOGICAL INFORMATION

Summary: No information is available about the potential of this material to produce adverse environmental effects. Local regulations and procedures should be consulted prior to environmental release.

13. DISPOSAL CONSIDERATIONS

Disposal Recommendations: For waste disposal purposes this material can be regarded as non-hazardous, however, all current local and national requirements must be observed when disposing of this material.

14. TRANSPORT INFORMATION

The SDS should accompany all shipments for reference in the event of spillage or accidental release. Only authorised persons trained and competent in accordance with appropriate national and international regulatory requirements may prepare dangerous goods for transport.

Basic Shipping Description: Not regulated in transport.

15. REGULATORY INFORMATION

The information included below is an overview of the major regulatory requirements. It should not be considered to be an exhaustive summary. Local regulations should be consulted for additional requirements.
EU Classification and Labelling

Classification(s) Xn; R22, R36
Symbol(s) Harmful (Xn)

Risk Phrase(s)
R22 - Harmful if swallowed.
R36 - Irritating to eyes.

Safety Phrase(s)
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37 - Wear suitable protective clothing and gloves.
S39 - Wear eye/face protection.
S60 - This material and/or its container must be disposed of as hazardous waste.

Classification This material is classified as hazardous according to the OSHA Hazard Communication Standard.
Target Organ Statement No specific target organ effects known.

Other Regulations
TSCA Status Exempt

16. OTHER INFORMATION

References GSK Hazard Determination
Ingredient Risk Phrase(s)
R22 - Harmful if swallowed.
R25 - Toxic if swallowed.
R34 - Causes burns.
R36 - Irritating to eyes.
R36/37/38 - Irritating to eyes, respiratory system and skin.
R41 - Risk of serious damage to eyes.
R50 - Very toxic to aquatic organisms.
R52 - Harmful to aquatic organisms.
R8 - Contact with combustible material may cause fire.

SDS Version Number

SDS Sections Updated

Sections Subsections
COMPOSITION / INFORMATION ON INGREDIENTS
GHS Classification
IDENTIFICATION OF SUBSTANCE / PREPARATION AND OF COMPANY
REGULATORY INFORMATION

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create any warranty, express or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material or product for any particular purpose.
Safety Data Sheet

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Material Name: Shell Turbo Oil T 68
Uses: Turbine oil.
Product Code: 001A9784
Manufacturer/Supplier: The Shell Company of Thailand Ltd
Klongtoey
10 Soonthornkosa Road
Bangkok
10110
Thailand
Telephone: (+66) 26579888
Fax: (+66) 26579609
Emergency Telephone Number: 0-2262-7333

2. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture Description: Highly refined mineral oils and additives.

Hazardous Components

<table>
<thead>
<tr>
<th>Chemical Identity</th>
<th>CAS</th>
<th>EINECS</th>
<th>Symbol(s)</th>
<th>R-phrase(s)</th>
<th>Conc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-phenyl-1-naphthylamine</td>
<td>90-30-2</td>
<td>201-983-0</td>
<td>Xi, N</td>
<td>R43; R50/53</td>
<td>0.10 - 0.24 %</td>
</tr>
</tbody>
</table>

Additional Information: The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

3. HAZARDS IDENTIFICATION

EC Classification: Not classified as dangerous under EC criteria.

Health Hazards: Not expected to be a health hazard when used under normal conditions. Prolonged or repeated skin contact without proper cleaning can clog the pores of the skin resulting in disorders such as oil acne/folliculitis. Used oil may contain harmful impurities.

Signs and Symptoms: Oil acne/folliculitis signs and symptoms may include formation of black pustules and spots on the skin of exposed areas. Ingestion may result in nausea, vomiting and/or diarrhoea.

Safety Hazards: Not classified as flammable but will burn.

Environmental Hazards: Not classified as dangerous for the environment.

4. FIRST AID MEASURES

General Information: Not expected to be a health hazard when used under normal conditions.
Safety Data Sheet

The first aid measures for different exposure routes:

**Inhalation:** No treatment necessary under normal conditions of use. If symptoms persist, obtain medical advice.

**Skin Contact:** Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

**Eye Contact:** Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention.

**Ingestion:** In general no treatment is necessary unless large quantities are swallowed, however, get medical advice.

**Advice to Physician:** Treat symptomatically.

5. **FIRE FIGHTING MEASURES**

Clear fire area of all non-emergency personnel.

**Specific Hazards:** Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds.

**Suitable Extinguishing Media:** Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

**Unsuitable Extinguishing Media:** Do not use water in a jet.

**Protective Equipment for Firefighters:** Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

6. **ACCIDENTAL RELEASE MEASURES**

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations.

**Protective measures:** Avoid contact with skin and eyes. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers.

**Clean Up Methods:** Slippery when spilt. Avoid accidents, clean up immediately. Prevent from spreading by making a barrier with sand, earth or other containment material. Reclaim liquid directly or in an absorbent. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly.

**Additional Advice:** Local authorities should be advised if significant spillages cannot be contained.

7. **HANDLING AND STORAGE**

**General Precautions:** Use local exhaust ventilation if there is risk of inhalation of vapours, mists or aerosols. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage.
Safety Data Sheet

Handling: Avoid prolonged or repeated contact with skin. Avoid inhaling vapour and/or mists. When handling product in drums, safety footwear should be worn and proper handling equipment should be used. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires.

Storage: Keep container tightly closed and in a cool, well-ventilated place. Use properly labelled and closeable containers. Store at ambient temperature.

Product Transfer: This material has the potential to be a static accumulator. Proper grounding and bonding procedures should be used during all bulk transfer operations.

Recommended Materials: For containers or container linings, use mild steel or high density polyethylene.

Unsuitable Materials: PVC.

Additional Information: Polyethylene containers should not be exposed to high temperatures because of possible risk of distortion.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.

Occupational Exposure Limits

<table>
<thead>
<tr>
<th>Material</th>
<th>Source</th>
<th>Type</th>
<th>ppm</th>
<th>mg/m³</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil mist, mineral</td>
<td>ACGIH</td>
<td>TWA(Inhalable fraction.)</td>
<td>5 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Biological Exposure Index (BEI)

No biological limit allocated.

Exposure Controls: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate ventilation to control airborne concentrations. Where material is heated, sprayed or mist formed, there is greater potential for airborne concentrations to be generated.

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection: No respiratory protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid breathing of material. If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where
Safety Data Sheet

air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for combined particulate/organic gases and vapours [boiling point >65°C(149 °F)].

Hand Protection : Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739) made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. For continuous contact we recommend gloves with breakthrough time of more than 240 minutes with preference for > 480 minutes where suitable gloves can be identified. For short-term/splash protection we recommend the same, but recognise that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time may be acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material.

Eye Protection : Wear safety glasses or full face shield if splashes are likely to occur.

Protective Clothing : Skin protection not ordinarily required beyond standard issue work clothes.

Monitoring Methods : Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Validated exposure measurement methods should be applied by a competent person and samples analysed by an accredited laboratory. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available.

Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/
Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances http://www.hse.gov.uk/
Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany. http://www.dguv.de/inhalt/index.jsp
| Environmental Exposure Controls | Minimise release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation. |

| 9. PHYSICAL AND CHEMICAL PROPERTIES |
| Appearance | Off-white. Liquid at room temperature. |
| Odour | Slight hydrocarbon. |
| pH | Not applicable. |
| Initial Boiling Point and Boiling Range | > 280 °C / 536 °F estimated value(s) |
| Pour point | Typical -9 °C / 16 °F |
| Flash point | Typical 240 °C / 464 °F (COC) |
| Upper / lower Flammability or Explosion limits | Typical 1 - 10 % (V) (based on mineral oil) |
| Auto-ignition temperature | > 320 °C / 608 °F |
| Vapour pressure | < 0.5 Pa at 20 °C / 68 °F (estimated value(s)) |
| Specific gravity | ca. 0.871 at 15 °C / 59 °F |
| Density | ca. 871 kg/m³ at 15 °C / 59 °F |
| Water solubility | Negligible. |
| Solubility in other solvents | Data not available |
| n-octanol/water partition coefficient (log Pow) | > 6 (based on information on similar products) |
| Dynamic viscosity | Data not available |
| Kinematic viscosity | Typical 68 mm²/s at 40 °C / 104 °F |
| Vapour density (air=1) | > 1 (estimated value(s)) |
| Electrical conductivity | This material is not expected to be a static accumulator. |
| Evaporation rate (nBuAc=1) | Data not available |
| Decomposition | Data not available |
| Temperature | Data not available |

| 10. STABILITY AND REACTIVITY |
| Stability | Stable. |
| Conditions to Avoid | Extremes of temperature and direct sunlight. |
| Materials to Avoid | Strong oxidising agents. |
| Hazardous Decomposition Products | Hazardous decomposition products are not expected to form during normal storage. |

| 11. TOXICOLOGICAL INFORMATION |
| Information on Toxicological effects |
| Basis for Assessment | Information given is based on data on the components and the toxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s). |
| Acute Oral Toxicity | Expected to be of low toxicity: LD50 > 5000 mg/kg, Rat |
| Acute Dermal Toxicity | Expected to be of low toxicity: LD50 > 5000 mg/kg, Rabbit |
| Acute Inhalation Toxicity | Not considered to be an inhalation hazard under normal conditions |
Safety Data Sheet

Skin Irritation: Expected to be slightly irritating.
Eye Irritation: Expected to be slightly irritating.
Respiratory Irritation: Inhalation of vapours or mists may cause irritation.
Sensitisation: Not expected to be a skin sensitiser.
Repeated Dose Toxicity: Not expected to be a hazard.
Mutagenicity: Not considered a mutagenic hazard.
Carcinogenicity: Not expected to be carcinogenic. Product contains mineral oils of types shown to be non-carcinogenic in animal skin-painting studies. Highly refined mineral oils are not classified as carcinogenic by the International Agency for Research on Cancer (IARC).

<table>
<thead>
<tr>
<th>Material</th>
<th>Carcinogenicity Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly refined mineral oil (IP346 &lt;3%)</td>
<td>ACGIH Group A4: Not classifiable as a human carcinogen.</td>
</tr>
<tr>
<td>Highly refined mineral oil (IP346 &lt;3%)</td>
<td>IARC 3: Not classifiable as to carcinogenicity to humans.</td>
</tr>
<tr>
<td>Highly refined mineral oil (IP346 &lt;3%)</td>
<td>GHS / CLP: No carcinogenicity classification</td>
</tr>
</tbody>
</table>

Reproductive and Developmental Toxicity: Not expected to be a hazard.
Additional Information: Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and they may present risks to health and the environment on disposal. ALL used oil should be handled with caution and skin contact avoided as far as possible.

12. ECOLOGICAL INFORMATION

Basis for Assessment: Ecotoxicological data have not been determined specifically for this product. Information given is based on a knowledge of the components and the ecotoxicology of similar products. Unless indicated otherwise, the data presented is representative of the product as a whole, rather than for individual component(s).

Ecotoxicity:
Acute Toxicity: Poorly soluble mixture. May cause physical fouling of aquatic organisms. Expected to be practically non toxic: LL/EL/IL50 > 100 mg/l (to aquatic organisms) LL/EL50 expressed as the nominal amount of product required to prepare aqueous test extract. Mineral oil is not expected to cause any chronic effects to aquatic organisms at concentrations less than 1 mg/l.

Microorganisms Mobility: Data not available
Persistence/degradability: Expected to be not readily biodegradable. Major constituents are expected to be inherently biodegradable, but the product contains components that may persist in the environment.

Print Date 13.02.2013
000000000308
MSDS_TH
Bioaccumulation: Contains components with the potential to bioaccumulate.

Other Adverse Effects: Product is a mixture of non-volatile components, which are not expected to be released to air in any significant quantities. Not expected to have ozone depletion potential, photochemical ozone creation potential or global warming potential.

13. DISPOSAL CONSIDERATIONS

Material Disposal: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

Container Disposal: Dispose in accordance with prevailing regulations, preferably to a recognised collector or contractor. The competence of the collector or contractor should be established beforehand.

Local Legislation: Disposal should be in accordance with applicable regional, national, and local laws and regulations.

14. TRANSPORT INFORMATION

Land (as per ADR classification): Not regulated
This material is not classified as dangerous under ADR regulations.

IMDG
This material is not classified as dangerous under IMDG regulations.

IATA (Country variations may apply)
This material is either not classified as dangerous under IATA regulations or needs to follow country specific requirements.

Additional Information: MARPOL Annex 1 rules apply for bulk shipments by sea.

15. REGULATORY INFORMATION
The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

EC Classification: Not classified as dangerous under EC criteria.
EC Symbols: No Hazard Symbol required
EC Risk Phrases: Not classified.
EC Safety Phrases: Not classified.

Chemical Inventory Status
EINECS: All components listed or polymer exempt.
TSCA: All components listed.
Safety Data Sheet

Sensitiser not sufficient to classify : Contains N-phenyl-1-naphthylamine. May produce an allergic reaction.

Other Information : Hazardous Substance Act. B.E. 2535

16. OTHER INFORMATION

R-phrase(s)

Not classified.
R43 May cause sensitisation by skin contact.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SDS Version Number : 1.1
SDS Effective Date : 12.02.2013
SDS Revisions : A vertical bar (|) in the left margin indicates an amendment from the previous version.
SDS Regulation : The content and format of this safety data sheet is in accordance with Notification of Ministry of Industry, Subject: Hazard Classification and Communication System of Hazardous Substances B.E.2555 (2012).
SDS Distribution : The information in this document should be made available to all who may handle the product.
Disclaimer : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
1 Identification

- Product identifier
  - Trade name: **Gluma Desensitizer**
  - Relevant identified uses of the substance or mixture and uses advised against
    No further relevant information available.
  - Application of the substance / the preparation For desensitisation of teeth

- Details of the supplier of the safety data sheet
  - Manufacturer/Supplier:
    Heraeus Kulzer GmbH
    Grüner Weg 11, D-63450 Hanau  
    Tel.: 0800 4372522
  - Information department:
    Marc Henn
    Tel. +1 (574) 2995444 / Fax: +1 (574) 2912542
    e-mail: marc.henn@kulzer-dental.com
  - Emergency telephone number:
    Emergency CONTACT (24-Hour-Number)
    GBK/Infotrac ID 105860: (domestic) 1 800 535 5053 or international (001) 352 323 3500

2 Hazard(s) identification

- Classification of the substance or mixture
  - Classification according to Directive 67/548/EEC or Directive 1999/45/EC
    Xn; Harmful
    R20/22: Harmful by inhalation and if swallowed.
    Xi; Irritant
    R37/38-41-42/43: Irritating to respiratory system and skin. Risk of serious damage to eyes. May cause sensitization by inhalation and skin contact.

- Information concerning particular hazards for human and environment:
  The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- Classification system:
  The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

- Label elements
  - Labelling according to EU guidelines:
    The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials
    - Code letter and hazard designation of product:
      Xn Harmful

    - Hazard-determining components of labeling:
      2-hydroxyethyl methacrylate
      glutaral

    - Risk phrases:
      20/22 Harmful by inhalation and if swallowed.
      37/38 Irritating to respiratory system and skin.
      41 Risk of serious damage to eyes.
      42/43 May cause sensitization by inhalation and skin contact.

    - Safety phrases:
      9 Keep container in a well-ventilated place.
**Trade name:** Gluma Desensitizer

- **23** Do not breathe gas/fumes/vapour/spray.
- **24** Avoid contact with skin.
- **26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- **37/39** Wear suitable gloves and eye/face protection.
- **45** In case of accident or if you feel unwell, seek medical advice immediately.

### Classification system
- **NFPA ratings for USA (scale 0-4)**
  - Health = 2
  - Fire = 0
  - Reactivity = 0
- **HMIS-Ratings (Scale 0-4)**
  - HEALTH
    - Health = *2
  - FIRE
    - Fire = 0
  - REACTIVITY
    - Reactivity = 0

### Other hazards
- For the wording of the listed risk phrases refer to section 16.

### 3 Composition/information on ingredients
- **Chemical characterization:** Mixtures
- **Description:**
  - **Dangerous components:**
    - 868-77-9 2-hydroxyethyl methacrylate Xi R36/38-43 25-50%
    - 111-30-8 glutaral T R23/25; C R34; Xi R42/43; N R50 5-10%

### 4 First-aid measures
- **Description of first aid measures**
  - **General information**
    - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
  - **After skin contact**
    - Immediately wash with water and soap and rinse thoroughly.
  - **After eye contact**
    - Rinse opened eye for several minutes under running water. Then consult a doctor.
  - **After swallowing**
    - Immediately call a doctor.
  - **Information for doctor**
    - Most important symptoms and effects, both acute and delayed
      - No further relevant information available.
    - Indication of any immediate medical attention and special treatment needed
      - No further relevant information available.

### 5 Fire-fighting measures
- **Extinguishing media**
  - Suitable extinguishing agents
    - CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - **Special hazards arising from the substance or mixture**
    - Formation of toxic gases is possible during heating or in case of fire.
6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures: Not required.
- Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up:
  - Absorb with liquid binding material (diatomite, universal binders, for small amounts tissues).
  - Dispose contaminated material as waste according to item 13.
  - Send for recovery or disposal in suitable receptacles.
- Reference to other sections
  - See Section 13 for disposal information.
  - See Section 8 for information on personal protection equipment.

7 Handling and storage

- Handling
  - Precautions for safe handling
    - Keep receptacles tightly sealed.
    - Wear protective equipment. Keep unprotected persons away.
    - Ensure good ventilation/exhaustion at the workplace.
  - Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage
  - Requirements to be met by storerooms and receptacles: No special requirements.
  - Information about storage in one common storage facility: Not required.
  - Further information about storage conditions: None.
- Specific end use(s): No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems: No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace:

<table>
<thead>
<tr>
<th>Component</th>
<th>REL (mg/m³)</th>
<th>TLV (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>111-30-8 glutaral</td>
<td>0.8</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>0.2</td>
<td>0.05</td>
</tr>
</tbody>
</table>

- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
  - Personal protective equipment
    - General protective and hygienic measures
      - Keep away from foodstuffs, beverages and feed.
      - Immediately remove all soiled and contaminated clothing
      - Wash hands before breaks and at the end of work.
      - Avoid contact with the eyes and skin.
    - Breathing equipment:
      - Not necessary with efficient local exhaust. If exposition to vapours is possible, use breathing protective mask (filter A).
### Trade name: Gluma Desensitizer

- **Protection of hands:**
  If skin contact cannot be avoided, protective gloves are recommended to avoid possible sensitization.
  Solvent resistant gloves
  The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

  - **Material of gloves**
    The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

  - **Penetration time of glove material**
    The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

  - **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
    - Butyl rubber, BR

- **Eye protection:**
  Before use, put on the protective goggles and cover the patient’s eyes to protect against splashes of material.

- **Body protection:** Light weight protective clothing

---

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Information</strong></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
</tr>
<tr>
<td>· Form: Fluid</td>
</tr>
<tr>
<td>· Color: Colorless</td>
</tr>
<tr>
<td>· Odor: Aromatic</td>
</tr>
<tr>
<td><strong>pH-value at 20 °C (68 °F):</strong> 4.0</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
</tr>
<tr>
<td>· Melting point/Melting range: undetermined</td>
</tr>
<tr>
<td>· Boiling point/Boiling range: 100 °C (212 °F)</td>
</tr>
<tr>
<td><strong>Flash point:</strong> Not applicable</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong> 230.0 °C (446 °F)</td>
</tr>
<tr>
<td><strong>Auto igniting:</strong> Product is not selfigniting.</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong> Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Vapor pressure at 20 °C (68 °F):</strong> 23 hPa (17 mm Hg)</td>
</tr>
<tr>
<td><strong>Density at 20 °C (68 °F):</strong> 1.16 g/cm³ (9.68 lbs/gal)</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with</strong></td>
</tr>
<tr>
<td>· Water: Not miscible or difficult to mix</td>
</tr>
<tr>
<td><strong>Solvent content:</strong></td>
</tr>
<tr>
<td>· Water: 58.8 %</td>
</tr>
<tr>
<td><strong>Other information</strong> No further relevant information available.</td>
</tr>
</tbody>
</table>
10 Stability and reactivity

- Possibility of hazardous reactions: No dangerous reactions known.
- Conditions to avoid: No further relevant information available.
- Incompatible materials: No further relevant information available.
- Hazardous decomposition products: None.

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      - Oral LD50 > 2000 mg/kg (rat)
  - Primary irritant effect:
    - on the skin: Irritant to skin and mucous membranes.
    - on the eye: Strong irritant with the danger of severe eye injury.
  - Sensitization:
    - Sensitization possible through inhalation.
    - Sensitization possible through skin contact.
- Additional toxicological information:
  - Harmful
  - Irritant
- Carcinogenic categories
  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.
  - NTP (National Toxicology Program)
    None of the ingredients is listed.

12 Ecological information

- Toxicity
  - Aquatic toxicity: No further relevant information available.
  - Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
  - Bioaccumulative potential: No further relevant information available.
  - Mobility in soil: No further relevant information available.
- Additional ecological information:
  - General notes:
    - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    - Danger to drinking water if even extremely small quantities leak into the ground.
  - Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation
    - Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
### 14 Transport information

- **UN-Number**
  - DOT, ADR, ADN, IMDG, IATA: Void

- **UN proper shipping name**
  - DOT, ADR, ADN, IMDG, IATA: Void

- **Transport hazard class(es)**
  - DOT, ADR, ADN, IMDG, IATA: Void

- **Packing group**
  - DOT, ADR, IMDG, IATA: Void

- **Environmental hazards:**
  - Marine pollutant: No

- **Special precautions for user**: Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**: Not applicable.

- **Transport/Additional information**: -

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - SARA Section 355 (extremely hazardous substances)
    - None of the ingredients is listed.

- **Cancerogenity categories**
  - TLV (Threshold Limit Value established by ACGIH)
    - 111-30-8 glutaral: A4

- **OSHA-Ca (Occupational Safety & Health Administration)**
  - None of the ingredients is listed.

### 16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**
  - R23/25 Toxic by inhalation and if swallowed.
  - R34 Causes burns.
  - R36/38 Irritating to eyes and skin.
  - R42/43 May cause sensitization by inhalation and skin contact.
  - R43 May cause sensitization by skin contact.
  - R50 Very toxic to aquatic organisms.

- **Data compared to the previous version altered.**
## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**Product name:** Cook-Waite Marcaine® 0.5% with epinephrine 1:200,000 injection (as bitartrate)

**Product code:** 1852557

**Supplier** Carestream Health, Inc., 150 Verona Street, Rochester, New York 14608

For Emergency Health Information call: 800-424-9300

For other information contact: 800-328-2910

**Product Use:** Anesthetic (prescription drug).

## 2. HAZARDS IDENTIFICATION

**Classification**

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

**Label elements**

**Emergency Overview**

**Appearance** No information available  
**Physical state** liquid  
**Odor** Odorless

**Hazards not otherwise classified (HNOC)**

* Not applicable

**Other Information**

Can cause local anesthesia (numbness in the exposed area).

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>98-100</td>
<td>*</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

First Aid Measures

General advice
If symptoms persist, call a physician. Show this material safety data sheet to the doctor in attendance.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately if symptoms occur.

Skin contact
Wash off immediately with soap and plenty of water for at least 15 minutes while removing all contaminated clothing and shoes. Get medical attention immediately if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Inhalation
Move to fresh air. Get medical attention immediately if symptoms occur.

Ingestion
If swallowed, do not induce vomiting - seek medical advice. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.

Most important symptoms and effects, both acute and delayed

Main Symptoms
Can cause local anesthesia (numbness in the exposed area).

Indication of any immediate medical attention and special treatment needed

Notes to physician
Treat symptomatically. May cause sensitization of susceptible persons. Adverse effects may be more pronounced in those receiving medications to alter blood pressure, or people with cardiovascular disease or drug sensitivity or allergy. See package insert for more detailed information.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media
None.

Specific hazards arising from the chemical
Thermal decomposition can lead to release of irritating gases and vapors. May cause sensitization by inhalation and skin contact.

Hazardous Combustion Products
None.

Explosion Data
- Sensitivity to Mechanical Impact: None.
- Sensitivity to Static Discharge: None.
6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Use personal protective equipment. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up
Cover liquid spill with sand, earth or other noncombustible absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling
Use only in area provided with appropriate exhaust ventilation. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions
Keep container tightly closed in a dry and well-ventilated place. Storage separately from incompatible materials.

Incompatible products
Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Measures
Ensure adequate ventilation. Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Safety glasses with side-shields. If splashes are likely to occur, wear: Face-shield.

Skin and body protection
Impervious gloves. Skin contact with the product must be prevented through the use of suitable protective clothing, gloves and footwear selected according to use condition exposure potential.
Respiratory protection
None required under normal usage.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>colorless</td>
<td>Odor</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Odorless</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks/Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point/range:</td>
<td>&gt; 100 °C</td>
<td>No information available</td>
</tr>
<tr>
<td>Boiling point/boiling range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td></td>
<td>Does not flash.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>upper flammability limit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lower flammability limit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>24 hPa</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>0.6</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Soluble in water</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Other information</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Softening point</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Density VALUE</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Bulk Density VALUE</td>
<td></td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
Not applicable

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to Avoid
To avoid thermal decomposition, do not overheat. Protect from light.

Incompatible Materials
Strong oxidizing agents.
11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

**Inhalation**
Expected to be a low hazard for recommended handling.

**Eye contact**
May cause eye irritation.

**Skin contact**
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May be absorbed through the skin in harmful amounts.

**Ingestion**
May be harmful if swallowed. Some asthmatics or sulfite-sensitive individuals may experience wheezing, chest tightness, stomach upset, hives, faintness, weakness and diarrhea.

Toxicology data for the components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water 7732-18-5</td>
<td>90,000 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sodium chloride 7647-14-5</td>
<td>3 g/kg (Rat)</td>
<td>Oral LD50 Rat 3 g/kg (Source: IUCLID)</td>
<td>-</td>
</tr>
<tr>
<td>Sodium metabisulfite 7681-57-4</td>
<td>1310 mg/kg (Rat)</td>
<td>Oral LD50 Rat 1310 mg/kg (Source: JAPAN_GHS)</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects

**Symptoms**
Can cause local anesthesia (numbness in the exposed area).

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

- **Sensitization**
  May cause sensitization by skin contact.

- **Mutagenic effects**
  No information available.

- **Carcinogenicity**
  No information available.

- **Reproductive toxicity**
  No information available.

- **STOT - single exposure**
  No information available

- **STOT - repeated exposure**
  No information available

  **Chronic toxicity**
  Repeated contact may cause allergic reactions in very susceptible persons.

- **Aspiration Hazard**
  No information available.

**Numerical measures of toxicity - Product Information**

- **Unknown acute toxicity**
  ATEmix (oral) >5000 mg/kg

12. ECOLOGICAL INFORMATION
Ecotoxicity

1.66% of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Toxicity to algae</th>
<th>Toxicity to fish</th>
<th>Toxicity to microorganisms</th>
<th>Toxicity to daphnia and other aquatic invertebrates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium chloride 7647-14-5</td>
<td>4747 - 7824: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 5560 - 6080: 96 h Lepomis macrochirus mg/L LC50 flow-through 6020 - 7070: 96 h Pimephales promelas mg/L LC50 static 6420 - 6700: 96 h Pimephales promelas mg/L LC50 static 12946: 96 h Lepomis macrochirus mg/L LC50 static 7050: 96 h Pimephales promelas mg/L LC50 semi-static</td>
<td>340.7 - 469.2: 48 h Daphnia magna mg/L EC50 Static 1000: 48 h Daphnia magna mg/L EC50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and degradability
No information available.

Bioaccumulation:
No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium metabisulfite 7681-57-4</td>
<td>-3.7</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Methods
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging
Do not re-use empty containers. Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

The information given below is provided to assist in documentation. It may supplement the information on the package. The package in your possession may carry a different version of the label depending on the date of manufacture. Depending on inner packaging quantities and packaging instructions, it may be subject to specific regulatory exceptions. Please consult the product packaging for further details.

DOT
Not regulated

TDG
Not regulated

ICAO/IATA
Not regulated

IMDG/IMO
Not regulated
For transportation information, go to: http://ship.carestream.com

15. REGULATORY INFORMATION

This is a drug and is regulated under the FDA

International Inventories

<table>
<thead>
<tr>
<th>International Inventory</th>
<th>Does not comply</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Complies</td>
<td></td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
<td></td>
</tr>
<tr>
<td>IECSC</td>
<td>Does not comply</td>
<td></td>
</tr>
<tr>
<td>KECL</td>
<td>Does not comply</td>
<td></td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
<td></td>
</tr>
<tr>
<td>AICS</td>
<td>Does not comply</td>
<td></td>
</tr>
<tr>
<td>NZIoC</td>
<td>Complies</td>
<td></td>
</tr>
</tbody>
</table>

Legend:
EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: No
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.
TSCA

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>U.S. - TSCA (Toxic Substances Control Act) - Section 8(a) - Chemical-Specific Reporting and Recordkeeping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium metabisulfite</td>
<td>PAIR: 01/26/1994</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>U.S. - TSCA (Toxic Substances Control Act) - Section 8(d) - 716.120(a) - Health and Safety Reporting - List of Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium metabisulfite</td>
<td>01/26/1994</td>
</tr>
</tbody>
</table>

| Sodium metabisulfite | 7681-57-4 (<0.1) |

U.S. State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

International Regulations

Mexico - Grade
No information available

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health Hazard 1</th>
<th>Flammability 0</th>
<th>Instability 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health Hazard 1</td>
<td>Flammability 0</td>
<td>Physical Hazard 0</td>
</tr>
</tbody>
</table>

Revision Date 2014-10-01
Revision Note (M)SDS sections updated

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet
1 Identification

- **Product identifier**
  - **Trade name:** Helio Progress

- **Relevant identified uses of the substance or mixture and uses advised against**
  - No further relevant information available.

- **Application of the substance / the preparation**
  - Light-curing resin-based dental restorative material

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:**
    - Ivoclar Vivadent Inc.
      - 175 Pineview Drive, Amherst, N.Y. 14228
      - USA
      - Tel. +1 800 533 6825
      - Fax +1 716 691 2285
    - Ivoclar Vivadent Inc.
      - 1-6600 Dixie Road
      - Mississauga, Ontario
      - L5T 2Y2
      - Canada
      - Phone: +1 905 670 8499
      - Fax: +1 905 670 3102
  - **Information department:** Quality Assurance / Regulatory Affairs
  - **Emergency telephone number:**
    - 24 Hour Emergency Assistance:
      - Emergency-Call USA - Infotrac: 1-800-535-5053
      - Emergency-Call Canada - Canutec: 1-613-996-6666
    - General MSDS Assistance:
      - US: 1-800-533-6825
      - Canada: 1-800-263-8182

(Contd. on page 2)
37.0.5

- **Hazard-determining components of labeling:**
  - urethane dimethacrylate
  - decamethylene dimethacrylate

- **Risk phrases:**
  - Irritating to eyes.
  - May cause sensitisation by skin contact.

- **Safety phrases:**
  - Avoid contact with skin.
  - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  - Wear suitable gloves.
  - This material and its container must be disposed of as hazardous waste.

- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 0
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 0
    - Reactivity = 0

- **Other hazards**
  - **Results of PBT and vPvB assessment**
    - PBT: Not applicable.
    - vPvB: Not applicable.

---

### 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
  - **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

<table>
<thead>
<tr>
<th>Substance ID</th>
<th>Substance Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1565-94-2</td>
<td>Bis-GMA</td>
<td>10-25%</td>
</tr>
<tr>
<td>72869-86-4</td>
<td>urethane dimethacrylate</td>
<td>2.5-10%</td>
</tr>
<tr>
<td>6701-13-9</td>
<td>decamethylene dimethacrylate</td>
<td>2.5-10%</td>
</tr>
</tbody>
</table>

---

### 4 First-aid measures

- **Description of first aid measures**
  - **After inhalation:**
    - Supply fresh air and to be sure call for a doctor.
    - In case of unconsciousness place patient stably in side position for transportation.
  - **After skin contact:** Rinse with water.
  - **After eye contact:**
    - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - **After swallowing:** If symptoms persist consult doctor.
  - **Information for doctor:**
    - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
Safety Data Sheet
acc. to OSHA HCS

Trade name: Helio Progress

- Indication of any immediate medical attention and special treatment needed
  No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards arising from the substance or mixture
  No further relevant information available.
- Advice for firefighters
  - Protective equipment: No special measures required.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Not required.
- Environmental precautions:
  Do not allow to enter sewers/surface or ground water.
- Methods and material for containment and cleaning up:
  Pick up mechanically.
- Reference to other sections
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

- Handling:
- Precautions for safe handling
  Only adequately trained personnel should handle this product.
  For use in dentistry only.
- Information about protection against explosions and fires
  No special measures required.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles:
    Store only in the original receptacle.
- Information about storage in one common storage facility
  Not required.
- Further information about storage conditions:
  - Protect from exposure to the light.
  - Protect from heat and direct sunlight.
  - Keep receptacle tightly sealed.
- Specific end use(s)
  No further relevant information available.

8 Exposure controls/personal protection

- Additional information about design of technical systems:
  No further data; see item 7.
- Control parameters
- Components with limit values that require monitoring at the workplace:
  The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- Additional information:
  The lists that were valid during the creation were used as basis.
Trade name: **Helio Progress**

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  Usual hygienic measures for dental practice.
  Wash hands before breaks and at the end of work.
  Avoid contact with the eyes and skin.
  Keep away from foodstuffs, beverages and feed.
- **Breathing equipment:** Not required.
- **Protection of hands:**
  
  **Protective gloves**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

### 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
  - **Appearance:**
    - **Form:** Pasty
    - **Color:** According to product specification
    - **Odor:** Characteristic
    - **Odour threshold:** Not determined.
  - **pH-value:** Not applicable.
- **Change in condition**
  - **Melting point/Melting range:** Undetermined.
  - **Boiling point/Boiling range:** Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
  - **Lower:** Not determined.
  - **Upper:** Not determined.
Trade name: **Helio Progress**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor pressure:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density at 20 °C (68 °F):</td>
<td>1.52 g/cm³ (12.684 lbs/gal)</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapour density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water</td>
<td>Nearly insoluble</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Dynamic: Not applicable. Kinematic: Not applicable.</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

### 10 Stability and reactivity

- **Reactivity**: No further relevant information available.
- **Chemical stability**
  - Stable under normal handling and storage conditions.
  - Photoreactive (Danger of polymerization).
- **Thermal decomposition / conditions to be avoided**: No decomposition if used according to specifications.
- **Possibility of hazardous reactions**: No dangerous reactions known.
- **Conditions to avoid**
  - Protect from exposure to the light.
  - Keep away from heat and direct sunlight.
- **Incompatible materials**: No further relevant information available.
- **Hazardous decomposition products**: None under normal conditions of storage and use.

### 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**:
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: Irritating effect.
  - Sensitization: Sensitization possible through skin contact.
- **Additional toxicological information**:
  - The product shows the following dangers according to internally approved calculation methods for preparations:
    - Irritant

- **Carcinogenic categories**
  - IARC (International Agency for Research on Cancer)
    - 7631-86-9 silicon dioxide, chemically prepared 3
  - NTP (National Toxicology Program)
    - None of the ingredients is listed.

(Contd. of page 4)
12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability: No further relevant information available.
- Behavior in environmental systems:
- Bioaccumulative potential: No further relevant information available.
- Mobility in soil: No further relevant information available.
- Additional ecological information:
- General notes:
  Water hazard class 1 (Self-assessment): slightly hazardous for water
  Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.
- Other adverse effects: No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- Recommendation:
  Take to an approved landfill or a waste incineration plant, under conditions approved by the local authority.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

14 Transport information

- UN-Number
  - DOT, ADR, ADN, IMDG, IATA: Void
- UN proper shipping name
  - DOT, ADR, ADN, IMDG, IATA: Void
- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA
  - Class: Void
- Packing group
  - DOT, ADR, IMDG, IATA: Void
- Environmental hazards:
  - Marine pollutant: No
- Special precautions for user: Not applicable.
- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable.
### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
  - **Sara**
    - **Section 355 (extremely hazardous substances):**
      None of the ingredients is listed.
    - **Section 313 (Specific toxic chemical listings):**
      None of the ingredients is listed.
    - **TSCA (Toxic Substances Control Act):**
      All ingredients are listed.
  - **Proposition 65**
    - **Chemicals known to cause cancer:**
      None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for females:**
      None of the ingredients is listed.
    - **Chemicals known to cause reproductive toxicity for males:**
      None of the ingredients is listed.
    - **Chemicals known to cause developmental toxicity:**
      None of the ingredients is listed.
  - **Carcinogenic categories**
    - **EPA (Environmental Protection Agency)**
      None of the ingredients is listed.
    - **TLV (Threshold Limit Value established by ACGIH)**
      None of the ingredients is listed.
    - **NIOSH-Ca (National Institute for Occupational Safety and Health)**
      None of the ingredients is listed.
    - **OSHA-Ca (Occupational Safety & Health Administration)**
      None of the ingredients is listed.
  - **Product related hazard informations:**
    Medical devices as defined in Directive 93/42/EEC and which are invasive or used in direct physical contact with the human body, are exempted from the provisions of Dangerous Substance Directive 1999/45/EC usually if they are in the finished state and intended for the final user.
  - **Hazard symbols:**
    - Irritant

- **Hazard-determining components of labeling:**
  - urethane dimethacrylate
  - decamethylene dimethacrylate

- **Risk phrases:**
  - Irritating to eyes.
  - May cause sensitisation by skin contact.
37.0.5

· Safety phrases:
  Avoid contact with skin.
  In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
  Wear suitable gloves.
  This material and its container must be disposed of as hazardous waste.

· National regulations:
· Other regulations, limitations and prohibitive regulations
  The product is a medical device according to the Directive 93/42/EEC.
  This product is classified as a medical device under US and Canadian regulations and has been reviewed by
  the US Food and Drug Administration and Health Canada.
· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any
specific product features and shall not establish a legally valid contractual relationship.