Safety Data Sheet

Copyright, 2017, 3M Company.
All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group: 28-3754-0
Issue Date: 03/09/17
Version Number: 1.03
Supercedes Date: 04/15/15

Product identifier
3M™ ESPE™ RelyX™ Unicem 2 Automix Refill

ID Number(s):

Recommended use
Dental Product, Dental Cement

Restrictions on use
For use only by dental professionals.

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)

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:
28-1333-5, 28-1380-6

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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 SDS available directly from 3M.

3M USA SDSs are available at www.3M.com
3M™ ESPE™ RelyX™ UNICEM 2 AUTOMIX CATALYST

Safety Data Sheet

Copyright, 2018, 3M Company. All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Issue Date: 10/23/18
Version Number: 7.00
Supercedes Date: 08/17/17

SECTION 1: Identification

1.1. Product identifier
3M™ ESPE™ RelyX™ UNICEM 2 AUTOMIX CATALYST

Product Identification Numbers
ID Number   UPC
LE-F100-0785-6
LE-F100-0785-9

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Cement

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 2A.
Skin Sensitizer: Category 1.

2.2. Label elements
Signal word
Warning
Symbols
Exclamation mark |

Pictograms

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

Precautionary Statements

Prevention:
Wear eye/face protection.
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.

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>GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL</td>
<td>None</td>
<td>50 - 70 Trade Secret *</td>
</tr>
<tr>
<td>SUBSTITUTED DIMETHACRYLATE</td>
<td>27689-12-9</td>
<td>10 - 30 Trade Secret *</td>
</tr>
<tr>
<td>1,12-DODECANE DIMETHACRYLATE</td>
<td>72829-09-5</td>
<td>&lt; 5 Trade Secret *</td>
</tr>
<tr>
<td>BARBITURIC ACID DERIVATE</td>
<td>945012-02-2</td>
<td>&lt; 5 Trade Secret *</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>68909-20-6</td>
<td>&lt; 5 Trade Secret *</td>
</tr>
<tr>
<td>SODIUM P-TOLUENESULFINATE</td>
<td>824-79-3</td>
<td>&lt; 5 Trade Secret *</td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>1305-62-0</td>
<td>&lt; 2 Trade Secret *</td>
</tr>
<tr>
<td>METHACRYLATED ALIPHATIC AMINE</td>
<td>93962-71-1</td>
<td>&lt; 2 Trade Secret *</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>128-37-0</td>
<td>&lt; 0.5</td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 2-[(2-HYDROXYETHYL)(3-METHOXYPROPYL)AMINO]ETHYL ESTER</td>
<td>93962-70-0</td>
<td>&lt; 0.5</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>13463-67-7</td>
<td>&lt; 0.5 Trade Secret *</td>
</tr>
</tbody>
</table>
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:
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. 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. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Do not get in eyes, on skin, or on clothing. 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.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Agency</th>
<th>Limit type</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>128-37-0</td>
<td>ACGIH</td>
<td>TWA(inhalable fraction and vapor):2 mg/m3</td>
<td>A4: Not class. as human carcin</td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>1305-62-0</td>
<td>ACGIH</td>
<td>TWA:5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>1305-62-0</td>
<td>OSHA</td>
<td>TWA(as total dust):15 mg/m3; TWA(respirable fraction):5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>13463-67-7</td>
<td>ACGIH</td>
<td>TWA:10 mg/m3</td>
<td>A4: Not class. as human carcin</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>13463-67-7</td>
<td>OSHA</td>
<td>TWA(as total dust):15 mg/m3</td>
<td></td>
</tr>
<tr>
<td>SILICA, AMORPHOUS</td>
<td>68909-20-6</td>
<td>OSHA</td>
<td>TWA concentration:0.8 mg/m3; TWA:20 millions of particles/cu. ft.</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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: tooth-colored pastes with slight acrylic odor  
Odor threshold: No Data Available  
PH: Not Applicable  
Melting point: No Data Available  
Boiling Point: No Data Available  
Flash Point: No flash point  
Evaporation rate: No Data Available  
Flammability (solid, gas): Not Classified  
Flammable Limits(LEL): No Data Available  
Flammable Limits(UEL): No Data Available  
Vapor Pressure: No Data Available  
Vapor Density: No Data Available  
Density: 2 - 2.2 g/cm³  
Specific Gravity: 2 - 2.2 [Ref Std: WATER=1]  
Solubility in Water: Nil  
Solubility- non-water: No Data Available  
Partition coefficient: n-octanol/ water: No Data Available  
Autoignition temperature: No Data Available  
Decomposition temperature: No Data Available  
Viscosity: No Data Available  
Molecular weight: No Data Available  
Percent volatile: 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
None known.

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td>None known.</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. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye Contact:**
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

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

**Additional Health Effects:**

**Carcinogenicity:**
Exposures needed to cause the following health effect(s) are not expected during normal, intended use:
Contains a chemical or chemicals which can cause cancer.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Class Description</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TITANIUM OXIDE</td>
<td>13463-67-7</td>
<td>Grp. 2B: Possible human carc.</td>
<td>International Agency for Research on Cancer</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 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL</td>
<td>Dermal</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL</td>
<td>Ingestion</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>SUBSTITUTED DIMETHACRYLATE</td>
<td>Dermal</td>
<td>Professio nal judgment</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>SUBSTITUTED DIMETHACRYLATE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 17,600 mg/kg</td>
</tr>
<tr>
<td>1,12-DODECANE DIMETHACRYLATE</td>
<td>Dermal</td>
<td>Professio nal judgment</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>1,12-DODECANE DIMETHACRYLATE</td>
<td>Ingestion</td>
<td>Similar compounds</td>
<td>LD50 2000-5000 mg/kg</td>
</tr>
<tr>
<td>BARBITURIC ACID DERIVATE</td>
<td>Dermal</td>
<td>Professio nal judgment</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>BARBITURIC ACID DERIVATE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 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>SODIUM P-TOLUENESULFINATE</td>
<td>Dermal</td>
<td>Professio nal judgment</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>SODIUM P-TOLUENESULFINATE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 3,200 mg/kg</td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 2,500 mg/kg</td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 3,340 mg/kg</td>
</tr>
<tr>
<td>METHACRYLATED ALIPHATIC AMINE</td>
<td>Dermal</td>
<td>Professio nal judgment</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>METHACRYLATED ALIPHATIC AMINE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 1,600 mg/kg</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Dermal</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,930 mg/kg</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 10,000 mg/kg</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 6.82 mg/l</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 10,000 mg/kg</td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 2-[(2-HYDROXYETHYL)(3-METHOXYPROPYL)AMINO]ETHYL ESTER</td>
<td>Dermal</td>
<td>Professio nal judgment</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 2-[(2-HYDROXYETHYL)(3-METHOXYPROPYL)AMINO]ETHYL ESTER</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 400 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>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2-METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL</td>
<td>Professio nal judgement</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>SUBSTITUTED DIMETHACRYLATE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>Human</td>
<td>Corrosive</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Human and animal</td>
<td>Minimal irritation</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

### Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBSTITUTED DIMETHACRYLATE</td>
<td>Guinea pig</td>
<td>Not classified</td>
</tr>
<tr>
<td>BARBITURIC ACID DERIVATE</td>
<td>Mouse</td>
<td>Not classified</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Human and animal</td>
<td>Not classified</td>
</tr>
<tr>
<td>METHACRYLATED ALIPHATIC AMINE</td>
<td>Professio nal judgement</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Human and animal</td>
<td>Not classified</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>Human and animal</td>
<td>Not classified</td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 2-<a href="3-METHOXYPROPYL">2-HYDROXYETHYL</a>AMINO]ETHYL ESTER</td>
<td>Professio nal judgement</td>
<td>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>SUBSTITUTED DIMETHACRYLATE</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>BARBITURIC ACID DERIVATE</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>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>In vivo</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>
</table>

---

Page 8 of 11
SILANE TREATED SILICA
Not Specified
Mouse
Some positive data exist, but the data are not sufficient for classification

2,6-DI-TERT-BUTYL-P-CRESOL
Ingestion
Multiple animal species
Some positive data exist, but the data are not sufficient for classification

TITANIUM OXIDE
Ingestion
Multiple animal species
Not carcinogenic

TITANIUM OXIDE
Inhalation
Rat
Carcinogenic

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 classified for 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 classified for 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 classified for development</td>
<td>Rat</td>
<td>NOAEL 1,350 mg/kg/day</td>
<td>during organogenesis</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>Not classified for female reproduction</td>
<td>Rat</td>
<td>NOAEL 500 mg/kg/day</td>
<td>2 generation</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>Not classified for male reproduction</td>
<td>Rat</td>
<td>NOAEL 500 mg/kg/day</td>
<td>2 generation</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>Not classified for development</td>
<td>Rat</td>
<td>NOAEL 100 mg/kg/day</td>
<td>2 generation</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>BARBITURIC ACID DERIVATE</td>
<td>Ingestion</td>
<td>nervous system</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>CALCIUM HYDROXIDE</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Human</td>
<td>LOAEL 2.5 mg/m3</td>
<td>20 minutes</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>Not classified</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>liver</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 250 mg/kg/day</td>
<td>28 days</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL 500 mg/kg/day</td>
<td>2 generation</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>blood</td>
<td>Not classified</td>
<td>Rat</td>
<td>LOAEL 420 mg/kg/day</td>
<td>40 days</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>endocrine system</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL 25 mg/kg/day</td>
<td>2 generation</td>
</tr>
<tr>
<td>2,6-DI-TERT-BUTYL-P-CRESOL</td>
<td>Ingestion</td>
<td>heart</td>
<td>Not classified</td>
<td>Mouse</td>
<td>NOAEL 3,480 mg/kg/day</td>
<td>10 weeks</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>LOAEL 0.01 mg/l</td>
<td>2 years</td>
</tr>
<tr>
<td>TITANIUM OXIDE</td>
<td>Inhalation</td>
<td>pulmonary fibrosis</td>
<td>Not classified</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</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 waste product in a permitted industrial waste facility.

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.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not applicable

Health Hazards
Respiratory or Skin Sensitization
Serious eye damage or eye irritation

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: 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: 28-1333-5 Version Number: 7.00
Issue Date: 10/23/18 Supercedes Date: 08/17/17

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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 SDS available directly from 3M.

3M USA SDSs are available at www.3M.com
3M™ ESPE™ RelyX™ UNICEM 2 AUTOMIX Base Paste

Safety Data Sheet

Copyright, 2018, 3M Company. All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group: 28-1380-6
Issue Date: 01/19/18
Version Number: 5.01
Supercedes Date: 02/25/16

SECTION 1: Identification

1.1. Product identifier
3M™ ESPE™ RelyX™ UNICEM 2 AUTOMIX Base Paste

Product Identification Numbers
LE-F100-0787-3, LE-F100-0787-4

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Cement

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
Skin Sensitizer: Category 1.

2.2. Label elements

Signal word
Warning

Symbols
Exclamation mark | Pictograms

Hazard Statements
May cause an allergic skin reaction.

Precautionary Statements

Prevention:
Wear protective gloves.
Contaminated work clothing must not be allowed out of the workplace.

Response:
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.

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>Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material</td>
<td>None</td>
<td>45 - 55 Trade Secret *</td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE</td>
<td>1224866-76-5</td>
<td>20 - 30 Trade Secret *</td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>109-16-0</td>
<td>10 - 20 Trade Secret *</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>68909-20-6</td>
<td>1 - 10 Trade Secret *</td>
</tr>
<tr>
<td>OXIDE GLASS CHEMICALS (non-fibrous)</td>
<td>65997-17-3</td>
<td>&lt; 3 Trade Secret *</td>
</tr>
<tr>
<td>SODIUM PERSULFATE</td>
<td>7775-27-1</td>
<td>&lt; 3 Trade Secret *</td>
</tr>
<tr>
<td>TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE</td>
<td>13122-18-4</td>
<td>&lt; 0.5 Trade Secret *</td>
</tr>
<tr>
<td>Acetic acid, copper(2+) salt, monohydrate</td>
<td>6046-93-1</td>
<td>&lt; 0.1 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. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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 in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage
7.1. Precautions for safe handling
A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. 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. Do not get in eyes.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Agency</th>
<th>Limit type</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPPER COMPOUNDS</td>
<td>6046-93-1</td>
<td>ACGIH</td>
<td>TWA (as Cu dust or mist): 1 mg/m³; TWA (as Cu, fume): 0.2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>SILICA, AMORPHOUS</td>
<td>68909-20-6</td>
<td>OSHA</td>
<td>TWA concentration: 0.8 mg/m³; TWA: 20 millions of particles/cu. ft.</td>
<td></td>
</tr>
<tr>
<td>PERSULFATE COMPOUNDS</td>
<td>7775-27-1</td>
<td>ACGIH</td>
<td>TWA (as persulfate): 0.1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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: toothcolored paste with slight acrylic odor
Odor threshold: No Data Available
pH: Not Applicable
Melting point: No Data Available
Boiling Point: No Data Available
Flash Point: No flash point
Evaporation rate: No Data Available
Flammability (solid, gas): Not Classified
Flammable Limits(LEL): No Data Available
Flammable Limits(UEL): No Data Available
Vapor Pressure: No Data Available
Vapor Density: No Data Available
Density: 2 - 2.2 g/cm³
Specific Gravity: 2 - 2.2 [Ref Std: WATER=1]
Solubility in Water: Negligible
Solubility- non-water: No Data Available
Partition coefficient: n-octanol/ water: No Data Available
Autoignition temperature: No Data Available
Decomposition temperature: No Data Available
Viscosity: No Data Available
Molecular weight: No Data Available
Percent volatile: 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
None known.

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. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye Contact:
Contact with the eyes during product use is not expected to result in significant irritation.

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.

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td></td>
<td>No data available; calculated ATE2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material</td>
<td>Dermal</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material</td>
<td>Ingestion</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 1,1'-(1-(HYDROXYMETHYL)-1,2-ETHANEDIYL) ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE</td>
<td>Dermal</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 1,1'-(1-(HYDROXYMETHYL)-1,2-ETHANEDIYL) ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 10,837 mg/kg</td>
</tr>
<tr>
<td>Name</td>
<td>Species</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-----------</td>
<td>---------------------------</td>
<td></td>
</tr>
<tr>
<td>Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material</td>
<td>Professio\nal judgeme\nt</td>
<td>No significant irritation</td>
<td></td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 1,1’-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
<td></td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Guinea pig</td>
<td>Mild irritant</td>
<td></td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Rabbit</td>
<td>No significant irritation</td>
<td></td>
</tr>
<tr>
<td>OXIDE GLASS CHEMICALS (non-fibrous)</td>
<td>Professio\nal judgeme\nt</td>
<td>No significant irritation</td>
<td></td>
</tr>
<tr>
<td>TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
<td></td>
</tr>
</tbody>
</table>

**Skin Corrosion/Irritation**

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td></td>
<td>No significant irritation</td>
</tr>
<tr>
<td>Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material</td>
<td>Professio\nal judgeme\nt</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 1,1’-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE</td>
<td>Rabbit</td>
<td>Corrosive</td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Professio\nal judgeme\nt</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>OXIDE GLASS CHEMICALS (non-fibrous)</td>
<td>Professio\nal judgeme\nt</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE</td>
<td>Rabbit</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>Overall product</td>
<td></td>
<td>No significant irritation</td>
</tr>
<tr>
<td>Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2-methyl-3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material</td>
<td>Professio\nal judgeme\nt</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 1,1’-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE</td>
<td>Rabbit</td>
<td>Corrosive</td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Professio\nal judgeme\nt</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>OXIDE GLASS CHEMICALS (non-fibrous)</td>
<td>Professio\nal judgeme\nt</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

**Skin Sensitization**

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 1,1’-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-</td>
<td>Guinea pig</td>
<td>Not classified</td>
</tr>
<tr>
<td>Name</td>
<td>Route</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>----------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td></td>
<td>Sensitizing</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td></td>
<td>Not classified</td>
</tr>
<tr>
<td>TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE</td>
<td></td>
<td>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>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Carcinogenicity**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Dermal</td>
<td>Mouse</td>
<td>Not carcinogenic</td>
<td></td>
<td></td>
</tr>
<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>
<td></td>
<td></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>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Ingestion</td>
<td>Not classified for female reproduction</td>
<td>Mouse</td>
<td>NOAEL 1 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Ingestion</td>
<td>Not classified for male reproduction</td>
<td>Mouse</td>
<td>NOAEL 1 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Ingestion</td>
<td>Not classified for development</td>
<td>Mouse</td>
<td>NOAEL 1 mg/kg/day</td>
<td>1 generation</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Ingestion</td>
<td>Not classified for 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 classified for 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 classified for development</td>
<td>Rat</td>
<td>NOAEL 1,350 mg/kg/day</td>
<td>during organogenesi</td>
</tr>
</tbody>
</table>

**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.

**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>TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)</td>
<td>Dermal</td>
<td>kidney and/or bladder</td>
<td>Not classified</td>
<td>Mouse</td>
<td>NOAEL 833 mg/kg/day</td>
<td>78 weeks</td>
</tr>
<tr>
<td>SILANE TREATED SILICA</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Not classified</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</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): 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.

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not applicable

Health Hazards
Respiratory or Skin Sensitization

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:  2  Flammability:  1  Instability:  1  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:  28-1380-6  
Version Number:  5.01
Issue Date:  01/19/18  
Supercedes Date:  02/25/16

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

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 SDS available directly from 3M.

3M USA SDSs are available at www.3M.com