

## SAFETY DATA SHEETS

**This SDS packet was issued with item:**

075036322

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

075034202 075035001 075035019 075035027 075035035 075035506 075035514 075035522 075035530 075035548  
075035555 075036306 075036314 075036330 075036439 075036512 075036520 075036538 075036546 075038625  
075038633 075038641 075038658 075038666 075038674 075038682 075038690 075038732 075038740 075038757  
079367442 079367444 079367446 079367450 079367452 079367458 079367461 079367464 079367467 079367478  
079367481 273007026 273009774 273015030 273016431 273016443 273020314 273022590 273023185



## Safety Data Sheet

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 18-0262-8 | <b>Version Number:</b>  | 9.01     |
| <b>Issue Date:</b>     | 01/17/18  | <b>Supersedes Date:</b> | 02/25/16 |

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RelyX™ Unicem Aplicap/Maxicap Powder

#### Product Identification Numbers

LE-FSF6-5681-1, LE-FSF6-5681-2, LE-FSFD-5682-2

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Dental Product, Universal luting material.

##### Restrictions on use

For use only by dental professionals.

#### 1.3. Supplier's details

|                      |                                         |
|----------------------|-----------------------------------------|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Oral Care Solutions Division            |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 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.

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1.

Carcinogenicity: Category 2.

#### 2.2. Label elements

Signal word

Danger

### Symbols

Health Hazard |

### Pictograms



### Hazard Statements

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

Suspected of causing cancer.

### Precautionary Statements

#### Prevention:

Obtain special instructions before use.

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

Avoid breathing dust/fume/gas/mist/vapors/spray.

In case of inadequate ventilation wear respiratory protection.

Wash thoroughly after handling.

Contaminated work clothing must not be allowed out of the workplace.

#### Response:

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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.

IF exposed or concerned: Get medical advice/attention.

#### Disposal:

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

## SECTION 3: Composition/information on ingredients

| Ingredient                          | C.A.S. No.  | % by Wt                |
|-------------------------------------|-------------|------------------------|
| OXIDE GLASS CHEMICALS (non-fibrous) | 65997-17-3  | 80 - 95 Trade Secret * |
| SODIUM PERSULFATE                   | 7775-27-1   | < 1 Trade Secret *     |
| Titanium Dioxide                    | 13463-67-7  | < 1 Trade Secret *     |
| SILANE TREATED SILICA               | 122334-95-6 | 5 - 10 Trade Secret *  |
| CALCIUM HYDROXIDE                   | 1305-62-0   | < 3 Trade Secret *     |
| SUBSTITUTED PYRIMIDINE              | 72846-00-5  | 1 - 5 Trade Secret *   |

\*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:

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

Material will not burn.

### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

### Hazardous Decomposition or By-Products

#### Substance

None known.

#### Condition

During Combustion

### 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.

### 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

Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. 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. Wash contaminated clothing before reuse. Do not get in eyes. Use personal protective equipment (gloves, respirators, etc.) as required. 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

No special storage requirements.

## 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.

| Ingredient           | C.A.S. No. | Agency | Limit type                                                   | Additional Comments            |
|----------------------|------------|--------|--------------------------------------------------------------|--------------------------------|
| CALCIUM HYDROXIDE    | 1305-62-0  | ACGIH  | TWA:5 mg/m3                                                  |                                |
| CALCIUM HYDROXIDE    | 1305-62-0  | OSHA   | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 |                                |
| Titanium Dioxide     | 13463-67-7 | ACGIH  | TWA:10 mg/m3                                                 | A4: Not class. as human carcin |
| Titanium Dioxide     | 13463-67-7 | OSHA   | TWA(as total dust):15 mg/m3                                  |                                |
| PERSULFATE COMPOUNDS | 7775-27-1  | ACGIH  | TWA(as persulfate):0.1 mg/m3                                 |                                |

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

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                                                |                                       |
|------------------------------------------------|---------------------------------------|
| <b>General Physical Form:</b>                  | Solid                                 |
| <b>Specific Physical Form:</b>                 | Powder                                |
| <b>Odor, Color, Grade:</b>                     | Odorless powders of different colors. |
| <b>Odor threshold</b>                          | <i>No Data Available</i>              |
| <b>pH</b>                                      | <i>Not Applicable</i>                 |
| <b>Melting point</b>                           | <i>No Data Available</i>              |
| <b>Boiling Point</b>                           | <i>Not Applicable</i>                 |
| <b>Flash Point</b>                             | No flash point                        |
| <b>Evaporation rate</b>                        | <i>Not Applicable</i>                 |
| <b>Flammability (solid, gas)</b>               | Not Classified                        |
| <b>Flammable Limits(LEL)</b>                   | <i>No Data Available</i>              |
| <b>Flammable Limits(UEL)</b>                   | <i>No Data Available</i>              |
| <b>Vapor Pressure</b>                          | <i>Not Applicable</i>                 |
| <b>Vapor Density</b>                           | <i>Not Applicable</i>                 |
| <b>Density</b>                                 | > 1 g/ml                              |
| <b>Specific Gravity</b>                        | <i>No Data Available</i>              |
| <b>Solubility in Water</b>                     | Negligible                            |
| <b>Solubility- non-water</b>                   | <i>No Data Available</i>              |
| <b>Partition coefficient: n-octanol/ water</b> | <i>No Data Available</i>              |
| <b>Autoignition temperature</b>                | <i>Not Applicable</i>                 |
| <b>Decomposition temperature</b>               | <i>No Data Available</i>              |
| <b>Viscosity</b>                               | <i>Not Applicable</i>                 |
| <b>Molecular weight</b>                        | <i>No Data Available</i>              |
| <b>Volatile Organic Compounds</b>              | <i>Not Applicable</i>                 |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material is considered to be non reactive under normal use conditions.

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

**10.6. Hazardous decomposition products****Substance**

None known.

**Condition**

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:**

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

Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

**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:**

Contains a chemical or chemicals which can cause cancer.

| <b><u>Ingredient</u></b> | <b><u>CAS No.</u></b> | <b><u>Class Description</u></b> | <b><u>Regulation</u></b>                    |
|--------------------------|-----------------------|---------------------------------|---------------------------------------------|
| Titanium Dioxide         | 13463-67-7            | Grp. 2B: Possible human carc.   | International Agency for Research on Cancer |

**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**

| Name                                | Route                          | Species                | Value                                                 |
|-------------------------------------|--------------------------------|------------------------|-------------------------------------------------------|
| Overall product                     | Dermal                         |                        | No data available; calculated ATE >5,000 mg/kg        |
| Overall product                     | Ingestion                      |                        | No data available; calculated ATE 2,000 - 5,000 mg/kg |
| OXIDE GLASS CHEMICALS (non-fibrous) | Dermal                         |                        | LD50 estimated to be > 5,000 mg/kg                    |
| OXIDE GLASS CHEMICALS (non-fibrous) | Ingestion                      |                        | LD50 estimated to be 2,000 - 5,000 mg/kg              |
| SILANE TREATED SILICA               | Dermal                         | Rabbit                 | LD50 > 5,000 mg/kg                                    |
| SILANE TREATED SILICA               | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 0.691 mg/l                                     |
| SILANE TREATED SILICA               | Ingestion                      | Rat                    | LD50 > 5,110 mg/kg                                    |
| CALCIUM HYDROXIDE                   | Dermal                         | Rabbit                 | LD50 > 2,500 mg/kg                                    |
| CALCIUM HYDROXIDE                   | Ingestion                      | Rat                    | LD50 7,340 mg/kg                                      |
| SUBSTITUTED PYRIMIDINE              | Dermal                         | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg              |
| SUBSTITUTED PYRIMIDINE              | Ingestion                      | Rat                    | LD50 > 2,000 mg/kg                                    |
| SODIUM PERSULFATE                   | Dermal                         | Rabbit                 | LD50 > 10,000 mg/kg                                   |
| SODIUM PERSULFATE                   | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 47.93 mg/l                                     |
| SODIUM PERSULFATE                   | Ingestion                      | Rat                    | LD50 895 mg/kg                                        |
| Titanium Dioxide                    | Dermal                         | Rabbit                 | LD50 > 10,000 mg/kg                                   |
| Titanium Dioxide                    | Inhalation-Dust/Mist (4 hours) | Rat                    | LC50 > 6.82 mg/l                                      |
| Titanium Dioxide                    | Ingestion                      | Rat                    | LD50 > 10,000 mg/kg                                   |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                                | Species                | Value                     |
|-------------------------------------|------------------------|---------------------------|
| OXIDE GLASS CHEMICALS (non-fibrous) | Professional judgement | No significant irritation |
| SILANE TREATED SILICA               | Rabbit                 | No significant irritation |
| CALCIUM HYDROXIDE                   | Human                  | Corrosive                 |
| Titanium Dioxide                    | Rabbit                 | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                                | Species                | Value                     |
|-------------------------------------|------------------------|---------------------------|
| OXIDE GLASS CHEMICALS (non-fibrous) | Professional judgement | No significant irritation |
| SILANE TREATED SILICA               | Rabbit                 | No significant irritation |
| CALCIUM HYDROXIDE                   | Rabbit                 | Corrosive                 |
| Titanium Dioxide                    | Rabbit                 | No significant irritation |

**Skin Sensitization**

| Name                   | Species          | Value          |
|------------------------|------------------|----------------|
| SILANE TREATED SILICA  | Human and animal | Not classified |
| SUBSTITUTED PYRIMIDINE | Mouse            | Not classified |
| Titanium Dioxide       | Human and animal | Not classified |

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

| Name                   | Route    | Value         |
|------------------------|----------|---------------|
| SILANE TREATED SILICA  | In Vitro | Not mutagenic |
| SUBSTITUTED PYRIMIDINE | In Vitro | Not mutagenic |
| Titanium Dioxide       | In Vitro | Not mutagenic |
| Titanium Dioxide       | In vivo  | Not mutagenic |

**Carcinogenicity**

| Name                  | Route         | Species                 | Value                                                                        |
|-----------------------|---------------|-------------------------|------------------------------------------------------------------------------|
| SILANE TREATED SILICA | Not Specified | Mouse                   | Some positive data exist, but the data are not sufficient for classification |
| Titanium Dioxide      | Ingestion     | Multiple animal species | Not carcinogenic                                                             |
| Titanium Dioxide      | Inhalation    | Rat                     | Carcinogenic                                                                 |

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

| Name                  | Route     | Value                                  | Species | Test Result           | Exposure Duration    |
|-----------------------|-----------|----------------------------------------|---------|-----------------------|----------------------|
| SILANE TREATED SILICA | Ingestion | Not classified for female reproduction | Rat     | NOAEL 509 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 497 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA | Ingestion | Not classified for development         | Rat     | NOAEL 1,350 mg/kg/day | during organogenesis |

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

| Name                   | Route      | Target Organ(s)        | Value                                                                        | Species | Test Result       | Exposure Duration |
|------------------------|------------|------------------------|------------------------------------------------------------------------------|---------|-------------------|-------------------|
| CALCIUM HYDROXIDE      | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human   | LOAEL 2.5 mg/m3   | 20 minutes        |
| SUBSTITUTED PYRIMIDINE | Ingestion  | nervous system         | Not classified                                                               | Rat     | NOAEL 2,000 mg/kg |                   |

**Specific Target Organ Toxicity - repeated exposure**

| Name                  | Route      | Target Organ(s)                | Value                                                                        | Species | Test Result         | Exposure Duration     |
|-----------------------|------------|--------------------------------|------------------------------------------------------------------------------|---------|---------------------|-----------------------|
| SILANE TREATED SILICA | Inhalation | respiratory system   silicosis | Not classified                                                               | Human   | NOAEL Not available | occupational exposure |
| Titanium Dioxide      | Inhalation | respiratory system             | Some positive data exist, but the data are not sufficient for classification | Rat     | LOAEL 0.01 mg/l     | 2 years               |
| Titanium Dioxide      | Inhalation | pulmonary fibrosis             | Not classified                                                               | Human   | NOAEL Not available | occupational exposure |

**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.

**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**

Carcinogenicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

**15.2. State Regulations**

Contact 3M for more information.

**California Proposition 65****Ingredient**

Titanium Dioxide

**C.A.S. No.**

13463-67-7

**Listing**

Carcinogen

**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:** 0 **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.

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 18-0262-8 | <b>Version Number:</b>  | 9.01     |
| <b>Issue Date:</b>     | 01/17/18  | <b>Supersedes Date:</b> | 02/25/16 |

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**Document Group:** 17-9608-5  
**Issue Date:** 01/19/18

**Version Number:** 7.01  
**Supersedes Date:** 02/25/16

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RELYX™ UNICEM™ APLICAP/MAXICAP LIQUID

#### Product Identification Numbers

LE-FSF6-5681-0, LE-FSFD-5682-1

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Dental Product, For use 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

Flammable Liquid: Category 4.

Serious Eye Damage/Irritation: Category 1.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Corrosion | Exclamation mark |

#### Pictograms



#### Hazard Statements

Combustible liquid.

Causes serious eye damage.

May cause an allergic skin reaction.

#### Precautionary Statements

##### Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wear protective gloves and eye/face protection.

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 ON SKIN: Wash with plenty of soap and water.

Immediately call a POISON CENTER or doctor/physician.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

##### Storage:

Store in a well-ventilated place. Keep cool.

##### Disposal:

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

### SECTION 3: Composition/information on ingredients

| Ingredient                                                                     | C.A.S. No.   | % by Wt                |
|--------------------------------------------------------------------------------|--------------|------------------------|
| mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid | 1224866-76-5 | 40 - 50 Trade Secret * |
| TRIETHYLENE GLYCOL DIMETHACRYLATE                                              | 109-16-0     | 25 - 35 Trade Secret * |
| SUBSTITUTED DIMETHACRYLATE                                                     | 27689-12-9   | 20 - 30 Trade Secret * |
| COPPER ACETATE                                                                 | 6046-93-1    | < 0.2 Trade Secret *   |

\*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:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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 flammable liquids such as dry chemical or carbon dioxide to extinguish.

**5.2. Special hazards arising from the substance or mixture**

Closed containers exposed to heat from fire may build pressure and explode.

**Hazardous Decomposition or By-Products****Substance**

Carbon monoxide

Carbon dioxide

**Condition**

During Combustion

During Combustion

**5.3. Special protective actions for fire-fighters**

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. 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. 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**

Contain spill. Collect as much of the spilled material as possible using non-sparking tools. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. 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.

### 7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Store away from heat. Store away from acids. Store away from oxidizing agents.

## 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.

| Ingredient       | C.A.S. No. | Agency | Limit type                                                 | Additional Comments |
|------------------|------------|--------|------------------------------------------------------------|---------------------|
| COPPER COMPOUNDS | 6046-93-1  | ACGIH  | TWA(as Cu dust or mist):1 mg/m3;TWA(as Cu, fume):0.2 mg/m3 |                     |

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:                  | Liquid                                    |
| Specific Physical Form:                 | Liquid                                    |
| Odor, Color, Grade:                     | Clear yellow liquid with acrylate odor.   |
| Odor threshold                          | No Data Available                         |
| pH                                      | 2.3                                       |
| Melting point                           | No Data Available                         |
| Boiling Point                           | > 200 °F                                  |
| Flash Point                             | 64 °C [Test Method: Tagliabue Closed Cup] |
| Evaporation rate                        | No Data Available                         |
| Flammability (solid, gas)               | Not Applicable                            |
| Flammable Limits(LEL)                   | No Data Available                         |
| Flammable Limits(UEL)                   | No Data Available                         |
| Vapor Pressure                          | No Data Available                         |
| Vapor Density                           | No Data Available                         |
| Density                                 | 1.14 g/ml                                 |
| Specific Gravity                        | 1.14 [Ref Std: WATER=1]                   |
| Solubility In Water                     | < 63 g/l                                  |
| 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 is considered to be non reactive under normal use conditions.

### 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

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
|------------------|------------------|

|             |  |
|-------------|--|
| None known. |  |
|-------------|--|

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:

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

##### 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:

Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

##### Ingestion:

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

| Name                                                                           | Route     | Species                | Value                                          |
|--------------------------------------------------------------------------------|-----------|------------------------|------------------------------------------------|
| Overall product                                                                | Ingestion |                        | No data available; calculated ATE >5,000 mg/kg |
| mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid | Dermal    |                        | LD50 estimated to be > 5,000 mg/kg             |
| mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid | Ingestion | Rat                    | LD50 > 2,000 mg/kg                             |
| TRIETHYLENE GLYCOL DIMETHACRYLATE                                              | Dermal    | Professional judgement | LD50 estimated to be > 5,000 mg/kg             |
| TRIETHYLENE GLYCOL DIMETHACRYLATE                                              | Ingestion | Rat                    | LD50 10,837 mg/kg                              |
| SUBSTITUTED DIMETHACRYLATE                                                     | Dermal    | Professional judgement | LD50 estimated to be > 5,000 mg/kg             |
| SUBSTITUTED DIMETHACRYLATE                                                     | Ingestion | Rat                    | LD50 > 17,600 mg/kg                            |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                                                                           | Species    | Value                     |
|--------------------------------------------------------------------------------|------------|---------------------------|
| mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid | Rabbit     | Minimal irritation        |
| TRIETHYLENE GLYCOL DIMETHACRYLATE                                              | Guinea pig | Mild irritant             |
| SUBSTITUTED DIMETHACRYLATE                                                     | Rabbit     | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                                                                           | Species                | Value             |
|--------------------------------------------------------------------------------|------------------------|-------------------|
| mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid | Rabbit                 | Corrosive         |
| TRIETHYLENE GLYCOL DIMETHACRYLATE                                              | Professional judgement | Moderate irritant |
| SUBSTITUTED DIMETHACRYLATE                                                     | Rabbit                 | Mild irritant     |

**Skin Sensitization**

| Name                                                                           | Species          | Value          |
|--------------------------------------------------------------------------------|------------------|----------------|
| mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid | Guinea pig       | Not classified |
| TRIETHYLENE GLYCOL DIMETHACRYLATE                                              | Human and animal | Sensitizing    |
| SUBSTITUTED DIMETHACRYLATE                                                     | Guinea pig       | Not classified |

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

| Name                                                                           | Route    | Value                                                                        |
|--------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------|
| mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid | In Vitro | Not mutagenic                                                                |
| TRIETHYLENE GLYCOL DIMETHACRYLATE                                              | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| SUBSTITUTED DIMETHACRYLATE                                                     | In Vitro | Not mutagenic                                                                |

**Carcinogenicity**

| Name                              | Route  | Species | Value            |
|-----------------------------------|--------|---------|------------------|
| TRIETHYLENE GLYCOL DIMETHACRYLATE | Dermal | Mouse   | Not carcinogenic |

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

| Name                              | Route     | Value                                  | Species | Test Result       | Exposure Duration |
|-----------------------------------|-----------|----------------------------------------|---------|-------------------|-------------------|
| TRIETHYLENE GLYCOL DIMETHACRYLATE | Ingestion | Not classified for female reproduction | Mouse   | NOAEL 1 mg/kg/day | 1 generation      |
| TRIETHYLENE GLYCOL DIMETHACRYLATE | Ingestion | Not classified for male reproduction   | Mouse   | NOAEL 1 mg/kg/day | 1 generation      |
| TRIETHYLENE GLYCOL DIMETHACRYLATE | Ingestion | Not classified for development         | Mouse   | NOAEL 1 mg/kg/day | 1 generation      |

**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**

| Name                              | Route  | Target Organ(s)               | Value          | Species | Test Result         | Exposure Duration |
|-----------------------------------|--------|-------------------------------|----------------|---------|---------------------|-------------------|
| TRIETHYLENE GLYCOL DIMETHACRYLATE | Dermal | kidney and/or bladder   blood | Not classified | Mouse   | NOAEL 833 mg/kg/day | 78 weeks          |

**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.

**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**

Flammable (gases, aerosols, liquids, or solids)

**Health Hazards**

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

**15.2. State Regulations**

Contact 3M for more information.

### California Proposition 65

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>Listing</u>            |
|-------------------|-------------------|---------------------------|
| Toluene           | 108-88-3          | Female reproductive toxin |
| Toluene           | 108-88-3          | Developmental Toxin       |

### 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:** 3 **Flammability:** 2 **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.

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 17-9608-5 | <b>Version Number:</b>  | 7.01     |
| <b>Issue Date:</b>     | 01/19/18  | <b>Supersedes Date:</b> | 02/25/16 |

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 28-3764-9 | <b>Version Number:</b>  | 1.02     |
| <b>Issue Date:</b>     | 04/15/15  | <b>Supersedes Date:</b> | 10/11/11 |

### Product identifier

3M™ ESPE™ RelyX Unicem 2 Automix Value Pack

### ID Number(s):

70-2011-3636-6, 70-2011-3660-6, 70-2011-4027-7, 70-2011-4028-5, 70-2011-4029-3

### Recommended use

Dental Product, Dental Cement

### Restrictions on use

For use only by dental professionals.

### Supplier's details

|                      |                                         |
|----------------------|-----------------------------------------|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | 3M ESPE Dental Products                 |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 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:**

28-1380-6, 28-1333-5

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**Document Group:** 28-1333-5

**Issue Date:** 10/23/18

**Version Number:** 7.00

**Supersedes 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

ID Number                      UPC  
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**

| <b>Ingredient</b>                                                                                                                      | <b>C.A.S. No.</b> | <b>% by Wt</b>         |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------|
| GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL | None              | 50 - 70 Trade Secret * |
| SUBSTITUTED DIMETHACRYLATE                                                                                                             | 27689-12-9        | 10 - 30 Trade Secret * |
| 1,12-DODECANE DIMETHACRYLATE                                                                                                           | 72829-09-5        | < 5 Trade Secret *     |
| BARBITURIC ACID DERIVATE                                                                                                               | 945012-02-2       | < 5 Trade Secret *     |
| SILANE TREATED SILICA                                                                                                                  | 68909-20-6        | < 5 Trade Secret *     |
| SODIUM P-TOLUENESULFINATE                                                                                                              | 824-79-3          | < 5 Trade Secret *     |
| CALCIUM HYDROXIDE                                                                                                                      | 1305-62-0         | < 2 Trade Secret *     |
| METHACRYLATED ALIPHATIC AMINE                                                                                                          | 93962-71-1        | < 2 Trade Secret *     |
| 2,6-DI-TERT-BUTYL-P-CRESOL                                                                                                             | 128-37-0          | < 0.5                  |
| 2-PROPENOIC ACID, 2-METHYL-, 2-[(2-HYDROXYETHYL)(3-METHOXYPROPYL)AMINO]ETHYL ESTER                                                     | 93962-70-0        | < 0.5                  |
| TITANIUM OXIDE                                                                                                                         | 13463-67-7        | < 0.5 Trade Secret *   |

\*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:

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

#### Substance

Carbon monoxide  
Carbon dioxide  
Irritant Vapors or Gases

#### Condition

During Combustion  
During Combustion  
During Combustion

### 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.

| <b>Ingredient</b>          | <b>C.A.S. No.</b> | <b>Agency</b> | <b>Limit type</b>                                                                     | <b>Additional Comments</b>     |
|----------------------------|-------------------|---------------|---------------------------------------------------------------------------------------|--------------------------------|
| 2,6-DI-TERT-BUTYL-P-CRESOL | 128-37-0          | ACGIH         | TWA(inhalable fraction and vapor):2 mg/m <sup>3</sup>                                 | A4: Not class. as human carcin |
| CALCIUM HYDROXIDE          | 1305-62-0         | ACGIH         | TWA:5 mg/m <sup>3</sup>                                                               |                                |
| CALCIUM HYDROXIDE          | 1305-62-0         | OSHA          | TWA(as total dust):15 mg/m <sup>3</sup> ;TWA(respirable fraction):5 mg/m <sup>3</sup> |                                |
| TITANIUM OXIDE             | 13463-67-7        | ACGIH         | TWA:10 mg/m <sup>3</sup>                                                              | A4: Not class. as human carcin |
| TITANIUM OXIDE             | 13463-67-7        | OSHA          | TWA(as total dust):15 mg/m <sup>3</sup>                                               |                                |
| SILICA, AMORPHOUS          | 68909-20-6        | OSHA          | TWA concentration:0.8 mg/m <sup>3</sup> ;TWA:20 millions of particles/cu. ft.         |                                |

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**

|                                                |                                               |
|------------------------------------------------|-----------------------------------------------|
| <b>General Physical Form:</b>                  | Solid                                         |
| <b>Specific Physical Form:</b>                 | Paste                                         |
| <b>Odor, Color, Grade:</b>                     | tooth-colored pastes with slight acrylic odor |
| <b>Odor threshold</b>                          | <i>No Data Available</i>                      |
| <b>pH</b>                                      | <i>Not Applicable</i>                         |
| <b>Melting point</b>                           | <i>No Data Available</i>                      |
| <b>Boiling Point</b>                           | <i>No Data Available</i>                      |
| <b>Flash Point</b>                             | No flash point                                |
| <b>Evaporation rate</b>                        | <i>No Data Available</i>                      |
| <b>Flammability (solid, gas)</b>               | Not Classified                                |
| <b>Flammable Limits(LEL)</b>                   | <i>No Data Available</i>                      |
| <b>Flammable Limits(UEL)</b>                   | <i>No Data Available</i>                      |
| <b>Vapor Pressure</b>                          | <i>No Data Available</i>                      |
| <b>Vapor Density</b>                           | <i>No Data Available</i>                      |
| <b>Density</b>                                 | 2 - 2.2 g/cm <sup>3</sup>                     |
| <b>Specific Gravity</b>                        | 2 - 2.2 [Ref Std: WATER=1]                    |
| <b>Solubility in Water</b>                     | Nil                                           |
| <b>Solubility- non-water</b>                   | <i>No Data Available</i>                      |
| <b>Partition coefficient: n-octanol/ water</b> | <i>No Data Available</i>                      |
| <b>Autoignition temperature</b>                | <i>No Data Available</i>                      |
| <b>Decomposition temperature</b>               | <i>No Data Available</i>                      |
| <b>Viscosity</b>                               | <i>No Data Available</i>                      |
| <b>Molecular weight</b>                        | <i>No Data Available</i>                      |
| <b>Percent volatile</b>                        | <i>No Data Available</i>                      |

**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

| <u>Substance</u> | <u>Condition</u> |
|------------------|------------------|
|------------------|------------------|

|             |  |
|-------------|--|
| None known. |  |
|-------------|--|

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.

| <u>Ingredient</u> | <u>CAS No.</u> | <u>Class Description</u>      | <u>Regulation</u>                           |
|-------------------|----------------|-------------------------------|---------------------------------------------|
| TITANIUM OXIDE    | 13463-67-7     | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

#### 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**

| Name                                                                                                                                   | Route                          | Species               | Value                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------|-------------------------------------------------------|
| Overall product                                                                                                                        | Dermal                         |                       | No data available; calculated ATE >5,000 mg/kg        |
| Overall product                                                                                                                        | Ingestion                      |                       | No data available; calculated ATE 2,000 - 5,000 mg/kg |
| GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL | Dermal                         |                       | LD50 estimated to be > 5,000 mg/kg                    |
| GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL | Ingestion                      |                       | LD50 estimated to be 2,000 - 5,000 mg/kg              |
| SUBSTITUTED DIMETHACRYLATE                                                                                                             | Dermal                         | Professional judgment | LD50 estimated to be > 5,000 mg/kg                    |
| SUBSTITUTED DIMETHACRYLATE                                                                                                             | Ingestion                      | Rat                   | LD50 > 17,600 mg/kg                                   |
| 1,12-DODECANE DIMETHACRYLATE                                                                                                           | Dermal                         | Professional judgment | LD50 estimated to be 2,000 - 5,000 mg/kg              |
| 1,12-DODECANE DIMETHACRYLATE                                                                                                           | Ingestion                      | similar compounds     | LD50 2000-5000 mg/kg                                  |
| BARBITURIC ACID DERIVATE                                                                                                               | Dermal                         | Professional judgment | LD50 estimated to be 2,000 - 5,000 mg/kg              |
| BARBITURIC ACID DERIVATE                                                                                                               | Ingestion                      | Rat                   | LD50 > 2,000 mg/kg                                    |
| SILANE TREATED SILICA                                                                                                                  | Dermal                         | Rabbit                | LD50 > 5,000 mg/kg                                    |
| SILANE TREATED SILICA                                                                                                                  | Inhalation-Dust/Mist (4 hours) | Rat                   | LC50 > 0.691 mg/l                                     |
| SILANE TREATED SILICA                                                                                                                  | Ingestion                      | Rat                   | LD50 > 5,110 mg/kg                                    |
| SODIUM P-TOLUENESULFINATE                                                                                                              | Dermal                         | Professional judgment | LD50 estimated to be 2,000 - 5,000 mg/kg              |
| SODIUM P-TOLUENESULFINATE                                                                                                              | Ingestion                      | Rat                   | LD50 3,200 mg/kg                                      |
| CALCIUM HYDROXIDE                                                                                                                      | Dermal                         | Rabbit                | LD50 > 2,500 mg/kg                                    |
| CALCIUM HYDROXIDE                                                                                                                      | Ingestion                      | Rat                   | LD50 7,340 mg/kg                                      |
| METHACRYLATED ALIPHATIC AMINE                                                                                                          | Dermal                         | Professional judgment | LD50 estimated to be > 5,000 mg/kg                    |
| METHACRYLATED ALIPHATIC AMINE                                                                                                          | Ingestion                      | Rat                   | LD50 > 1,600 mg/kg                                    |
| 2,6-DI-TERT-BUTYL-P-CRESOL                                                                                                             | Dermal                         | Rat                   | LD50 > 2,000 mg/kg                                    |
| 2,6-DI-TERT-BUTYL-P-CRESOL                                                                                                             | Ingestion                      | Rat                   | LD50 > 2,930 mg/kg                                    |
| TITANIUM OXIDE                                                                                                                         | Dermal                         | Rabbit                | LD50 > 10,000 mg/kg                                   |
| TITANIUM OXIDE                                                                                                                         | Inhalation-Dust/Mist (4 hours) | Rat                   | LC50 > 6.82 mg/l                                      |
| TITANIUM OXIDE                                                                                                                         | Ingestion                      | Rat                   | LD50 > 10,000 mg/kg                                   |
| 2-PROPENOIC ACID, 2-METHYL-, 2-[(2-HYDROXYETHYL)(3-METHOXYPROPYL)AMINO]ETHYL ESTER                                                     | Dermal                         | Professional judgment | LD50 estimated to be > 5,000 mg/kg                    |
| 2-PROPENOIC ACID, 2-METHYL-, 2-[(2-HYDROXYETHYL)(3-METHOXYPROPYL)AMINO]ETHYL ESTER                                                     | Ingestion                      | Rat                   | LD50 > 400 mg/kg                                      |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name | Species | Value |
|------|---------|-------|
|------|---------|-------|

|                                                                                                                                        |                        |                           |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------|
| GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL | Professional judgement | No significant irritation |
| SUBSTITUTED DIMETHACRYLATE                                                                                                             | Rabbit                 | No significant irritation |
| SILANE TREATED SILICA                                                                                                                  | Rabbit                 | No significant irritation |
| CALCIUM HYDROXIDE                                                                                                                      | Human                  | Corrosive                 |
| 2,6-DI-TERT-BUTYL-P-CRESOL                                                                                                             | Human and animal       | Minimal irritation        |
| TITANIUM OXIDE                                                                                                                         | Rabbit                 | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                                                                                                                                   | Species                | Value                     |
|----------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------|
| GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL-3-(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL | Professional judgement | No significant irritation |
| SUBSTITUTED DIMETHACRYLATE                                                                                                             | Rabbit                 | Mild irritant             |
| SILANE TREATED SILICA                                                                                                                  | Rabbit                 | No significant irritation |
| CALCIUM HYDROXIDE                                                                                                                      | Rabbit                 | Corrosive                 |
| 2,6-DI-TERT-BUTYL-P-CRESOL                                                                                                             | Rabbit                 | Mild irritant             |
| TITANIUM OXIDE                                                                                                                         | Rabbit                 | No significant irritation |

**Skin Sensitization**

| Name                                                                               | Species                | Value          |
|------------------------------------------------------------------------------------|------------------------|----------------|
| SUBSTITUTED DIMETHACRYLATE                                                         | Guinea pig             | Not classified |
| BARBITURIC ACID DERIVATE                                                           | Mouse                  | Not classified |
| SILANE TREATED SILICA                                                              | Human and animal       | Not classified |
| METHACRYLATED ALIPHATIC AMINE                                                      | Professional judgement | Sensitizing    |
| 2,6-DI-TERT-BUTYL-P-CRESOL                                                         | Human                  | Not classified |
| TITANIUM OXIDE                                                                     | Human and animal       | Not classified |
| 2-PROPENOIC ACID, 2-METHYL-, 2-[(2-HYDROXYETHYL)(3-METHOXYPROPYL)AMINO]ETHYL ESTER | Professional judgement | Sensitizing    |

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

| Name                       | Route    | Value         |
|----------------------------|----------|---------------|
| SUBSTITUTED DIMETHACRYLATE | In Vitro | Not mutagenic |
| BARBITURIC ACID DERIVATE   | In Vitro | Not mutagenic |
| SILANE TREATED SILICA      | In Vitro | Not mutagenic |
| 2,6-DI-TERT-BUTYL-P-CRESOL | In Vitro | Not mutagenic |
| 2,6-DI-TERT-BUTYL-P-CRESOL | In vivo  | Not mutagenic |
| TITANIUM OXIDE             | In Vitro | Not mutagenic |
| TITANIUM OXIDE             | In vivo  | Not mutagenic |

**Carcinogenicity**

| Name | Route | Species | Value |
|------|-------|---------|-------|
|------|-------|---------|-------|

|                            |               |                         |                                                                              |
|----------------------------|---------------|-------------------------|------------------------------------------------------------------------------|
| 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

| Name                       | Route     | Value                                  | Species | Test Result           | Exposure Duration    |
|----------------------------|-----------|----------------------------------------|---------|-----------------------|----------------------|
| SILANE TREATED SILICA      | Ingestion | Not classified for female reproduction | Rat     | NOAEL 509 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA      | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 497 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA      | Ingestion | Not classified for development         | Rat     | NOAEL 1,350 mg/kg/day | during organogenesis |
| 2,6-DI-TERT-BUTYL-P-CRESOL | Ingestion | Not classified for female reproduction | Rat     | NOAEL 500 mg/kg/day   | 2 generation         |
| 2,6-DI-TERT-BUTYL-P-CRESOL | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 500 mg/kg/day   | 2 generation         |
| 2,6-DI-TERT-BUTYL-P-CRESOL | Ingestion | Not classified for development         | Rat     | NOAEL 100 mg/kg/day   | 2 generation         |

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

| Name                     | Route      | Target Organ(s)        | Value                                                                        | Species | Test Result       | Exposure Duration |
|--------------------------|------------|------------------------|------------------------------------------------------------------------------|---------|-------------------|-------------------|
| BARBITURIC ACID DERIVATE | Ingestion  | nervous system         | Not classified                                                               | Rat     | NOAEL 2,000 mg/kg |                   |
| CALCIUM HYDROXIDE        | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human   | LOAEL 2.5 mg/m3   | 20 minutes        |

### Specific Target Organ Toxicity - repeated exposure

| Name                       | Route      | Target Organ(s)                | Value                                                                        | Species | Test Result           | Exposure Duration     |
|----------------------------|------------|--------------------------------|------------------------------------------------------------------------------|---------|-----------------------|-----------------------|
| SILANE TREATED SILICA      | Inhalation | respiratory system   silicosis | Not classified                                                               | Human   | NOAEL Not available   | occupational exposure |
| 2,6-DI-TERT-BUTYL-P-CRESOL | Ingestion  | liver                          | Some positive data exist, but the data are not sufficient for classification | Rat     | NOAEL 250 mg/kg/day   | 28 days               |
| 2,6-DI-TERT-BUTYL-P-CRESOL | Ingestion  | kidney and/or bladder          | Not classified                                                               | Rat     | NOAEL 500 mg/kg/day   | 2 generation          |
| 2,6-DI-TERT-BUTYL-P-CRESOL | Ingestion  | blood                          | Not classified                                                               | Rat     | LOAEL 420 mg/kg/day   | 40 days               |
| 2,6-DI-TERT-BUTYL-P-CRESOL | Ingestion  | endocrine system               | Not classified                                                               | Rat     | NOAEL 25 mg/kg/day    | 2 generation          |
| 2,6-DI-TERT-BUTYL-P-CRESOL | Ingestion  | heart                          | Not classified                                                               | Mouse   | NOAEL 3,480 mg/kg/day | 10 weeks              |
| TITANIUM OXIDE             | Inhalation | respiratory system             | Some positive data exist, but the data are not sufficient for classification | Rat     | LOAEL 0.01 mg/l       | 2 years               |
| TITANIUM OXIDE             | Inhalation | pulmonary fibrosis             | Not classified                                                               | Human   | NOAEL Not available   | occupational exposure |

## 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.

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Issue Date: 10/23/18

Version Number: 7.00  
Supersedes Date: 08/17/17

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## Safety Data Sheet

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**Document Group:** 28-1380-6

**Issue Date:** 01/19/18

**Version Number:** 5.01

**Supersedes 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

| Ingredient                                                                                                                                                                     | C.A.S. No.   | % by Wt                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------------------------|
| 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 | None         | 45 - 55 Trade Secret * |
| 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               | 1224866-76-5 | 20 - 30 Trade Secret * |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)                                                                                                                                     | 109-16-0     | 10 - 20 Trade Secret * |
| SILANE TREATED SILICA                                                                                                                                                          | 68909-20-6   | 1 - 10 Trade Secret *  |
| OXIDE GLASS CHEMICALS (non-fibrous)                                                                                                                                            | 65997-17-3   | < 3 Trade Secret *     |
| SODIUM PERSULFATE                                                                                                                                                              | 7775-27-1    | < 3 Trade Secret *     |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE                                                                                                                                     | 13122-18-4   | < 0.5 Trade Secret *   |
| Acetic acid, copper(2+) salt, monohydrate                                                                                                                                      | 6046-93-1    | < 0.1 Trade Secret *   |

\*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****Substance**

Carbon monoxide  
Carbon dioxide  
Irritant Vapors or Gases

**Condition**

During Combustion  
During Combustion  
During Combustion

**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.

| <b>Ingredient</b>    | <b>C.A.S. No.</b> | <b>Agency</b> | <b>Limit type</b>                                                                   | <b>Additional Comments</b> |
|----------------------|-------------------|---------------|-------------------------------------------------------------------------------------|----------------------------|
| COPPER COMPOUNDS     | 6046-93-1         | ACGIH         | TWA(as Cu dust or mist):1 mg/m <sup>3</sup> ;TWA(as Cu, fume):0.2 mg/m <sup>3</sup> |                            |
| SILICA, AMORPHOUS    | 68909-20-6        | OSHA          | TWA concentration:0.8 mg/m <sup>3</sup> ;TWA:20 millions of particles/cu. ft.       |                            |
| PERSULFATE COMPOUNDS | 7775-27-1         | ACGIH         | TWA(as persulfate):0.1 mg/m <sup>3</sup>                                            |                            |

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**

|                                                |                                             |
|------------------------------------------------|---------------------------------------------|
| <b>General Physical Form:</b>                  | Solid                                       |
| <b>Specific Physical Form:</b>                 | Paste                                       |
| <b>Odor, Color, Grade:</b>                     | toothcolored paste with slight acrylic odor |
| <b>Odor threshold</b>                          | <i>No Data Available</i>                    |
| <b>pH</b>                                      | <i>Not Applicable</i>                       |
| <b>Melting point</b>                           | <i>No Data Available</i>                    |
| <b>Boiling Point</b>                           | <i>No Data Available</i>                    |
| <b>Flash Point</b>                             | No flash point                              |
| <b>Evaporation rate</b>                        | <i>No Data Available</i>                    |
| <b>Flammability (solid, gas)</b>               | Not Classified                              |
| <b>Flammable Limits(LEL)</b>                   | <i>No Data Available</i>                    |
| <b>Flammable Limits(UEL)</b>                   | <i>No Data Available</i>                    |
| <b>Vapor Pressure</b>                          | <i>No Data Available</i>                    |
| <b>Vapor Density</b>                           | <i>No Data Available</i>                    |
| <b>Density</b>                                 | 2 - 2.2 g/cm <sup>3</sup>                   |
| <b>Specific Gravity</b>                        | 2 - 2.2 [Ref Std: WATER=1]                  |
| <b>Solubility in Water</b>                     | Negligible                                  |
| <b>Solubility- non-water</b>                   | <i>No Data Available</i>                    |
| <b>Partition coefficient: n-octanol/ water</b> | <i>No Data Available</i>                    |
| <b>Autoignition temperature</b>                | <i>No Data Available</i>                    |
| <b>Decomposition temperature</b>               | <i>No Data Available</i>                    |
| <b>Viscosity</b>                               | <i>No Data Available</i>                    |
| <b>Molecular weight</b>                        | <i>No Data Available</i>                    |
| <b>Percent volatile</b>                        | <i>No Data Available</i>                    |

**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****Substance****Condition**

None known.

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.

#### Acute Toxicity

| Name                                                                                                                                                                           | Route     | Species                | Value                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------|------------------------------------------------------|
| Overall product                                                                                                                                                                | Ingestion |                        | No data available; calculated ATE2,000 - 5,000 mg/kg |
| 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 | Dermal    |                        | LD50 estimated to be > 5,000 mg/kg                   |
| 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 | Ingestion |                        | LD50 estimated to be 2,000 - 5,000 mg/kg             |
| 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               | Dermal    |                        | LD50 estimated to be > 5,000 mg/kg                   |
| 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               | Ingestion | Rat                    | LD50 > 2,000 mg/kg                                   |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)                                                                                                                                     | Dermal    | Professional judgement | LD50 estimated to be > 5,000 mg/kg                   |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)                                                                                                                                     | Ingestion | Rat                    | LD50 10,837 mg/kg                                    |

|                                            |                                |        |                                          |
|--------------------------------------------|--------------------------------|--------|------------------------------------------|
| SILANE TREATED SILICA                      | Dermal                         | Rabbit | LD50 > 5,000 mg/kg                       |
| SILANE TREATED SILICA                      | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 0.691 mg/l                        |
| SILANE TREATED SILICA                      | Ingestion                      | Rat    | LD50 > 5,110 mg/kg                       |
| OXIDE GLASS CHEMICALS (non-fibrous)        | Dermal                         |        | LD50 estimated to be > 5,000 mg/kg       |
| OXIDE GLASS CHEMICALS (non-fibrous)        | Ingestion                      |        | LD50 estimated to be 2,000 - 5,000 mg/kg |
| SODIUM PERSULFATE                          | Dermal                         | Rabbit | LD50 > 10,000 mg/kg                      |
| SODIUM PERSULFATE                          | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 47.93 mg/l                        |
| SODIUM PERSULFATE                          | Ingestion                      | Rat    | LD50 895 mg/kg                           |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE | Dermal                         | Rat    | LD50 > 2,000 mg/kg                       |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE | Inhalation-Dust/Mist (4 hours) | Rat    | LC50 > 0.8 mg/l                          |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE | Ingestion                      | Rat    | LD50 12,905 mg/kg                        |

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

| Name                                                                                                                                                                            | Species                | Value                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------|
| 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 | Professional judgement | No significant irritation |
| 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                | Rabbit                 | Minimal irritation        |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)                                                                                                                                      | Guinea pig             | Mild irritant             |
| SILANE TREATED SILICA                                                                                                                                                           | Rabbit                 | No significant irritation |
| OXIDE GLASS CHEMICALS (non-fibrous)                                                                                                                                             | Professional judgement | No significant irritation |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE                                                                                                                                      | Rabbit                 | No significant irritation |

### Serious Eye Damage/Irritation

| Name                                                                                                                                                                            | Species                | Value                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------|
| Overall product                                                                                                                                                                 |                        | No significant irritation |
| 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 | Professional judgement | No significant irritation |
| 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                | Rabbit                 | Corrosive                 |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)                                                                                                                                      | Professional judgement | Moderate irritant         |
| SILANE TREATED SILICA                                                                                                                                                           | Rabbit                 | No significant irritation |
| OXIDE GLASS CHEMICALS (non-fibrous)                                                                                                                                             | Professional judgement | No significant irritation |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE                                                                                                                                      | Rabbit                 | No significant irritation |

### Skin Sensitization

| Name                                                                                                              | Species    | Value          |
|-------------------------------------------------------------------------------------------------------------------|------------|----------------|
| 2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3- | Guinea pig | Not classified |

|                                                 |                  |                |
|-------------------------------------------------|------------------|----------------|
| PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE |                  |                |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)      | Human and animal | Sensitizing    |
| SILANE TREATED SILICA                           | Human and animal | Not classified |
| TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE      | Guinea pig       | Sensitizing    |

### Respiratory Sensitization

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

### Germ Cell Mutagenicity

| Name                                                                                                                                                             | Route    | Value                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------------------------------------------------------------------------|
| 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 | In Vitro | Not mutagenic                                                                |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)                                                                                                                       | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| SILANE TREATED SILICA                                                                                                                                            | In Vitro | Not mutagenic                                                                |

### Carcinogenicity

| Name                                       | Route         | Species | Value                                                                        |
|--------------------------------------------|---------------|---------|------------------------------------------------------------------------------|
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Dermal        | Mouse   | Not carcinogenic                                                             |
| SILANE TREATED SILICA                      | Not Specified | Mouse   | Some positive data exist, but the data are not sufficient for classification |

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

| Name                                       | Route     | Value                                  | Species | Test Result           | Exposure Duration    |
|--------------------------------------------|-----------|----------------------------------------|---------|-----------------------|----------------------|
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Ingestion | Not classified for female reproduction | Mouse   | NOAEL 1 mg/kg/day     | 1 generation         |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Ingestion | Not classified for male reproduction   | Mouse   | NOAEL 1 mg/kg/day     | 1 generation         |
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Ingestion | Not classified for development         | Mouse   | NOAEL 1 mg/kg/day     | 1 generation         |
| SILANE TREATED SILICA                      | Ingestion | Not classified for female reproduction | Rat     | NOAEL 509 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA                      | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 497 mg/kg/day   | 1 generation         |
| SILANE TREATED SILICA                      | Ingestion | Not classified for development         | Rat     | NOAEL 1,350 mg/kg/day | during organogenesis |

### 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

| Name                                       | Route      | Target Organ(s)                | Value          | Species | Test Result         | Exposure Duration     |
|--------------------------------------------|------------|--------------------------------|----------------|---------|---------------------|-----------------------|
| TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA) | Dermal     | kidney and/or bladder   blood  | Not classified | Mouse   | NOAEL 833 mg/kg/day | 78 weeks              |
| SILANE TREATED SILICA                      | Inhalation | respiratory system   silicosis | Not classified | Human   | NOAEL Not available | occupational exposure |

**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.

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