



## Safety Data Sheet

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|------------------------|-----------|-------------------------|---------------|
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### Product identifier

3M™ESPE™ 56960 Post and Core Kit

### ID Number(s):

70-2011-4430-3

### Recommended use

Dental Product, Post Cementation

### 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:**

33-1594-2, 29-8287-4, 28-1333-5, 28-1380-6

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RelyX™ UNICEM 2 AUTOMIX CATALYST

#### Product Identification Numbers

| ID Number      | UPC | ID Number      | UPC |
|----------------|-----|----------------|-----|
| LE-F100-0785-6 |     | LE-F100-0785-9 |     |

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

##### Recommended use

Dental Product, Cement

##### Restrictions on use

For use only by dental professionals.

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <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.

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**

| Ingredient   | C.A.S. No.  | % by Wt                |
|--|-------------|------------------------|
| 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

| <u>Substance</u>         | <u>Condition</u>  |
|--------------------------|-------------------|
| Carbon monoxide          | During Combustion |
| Carbon dioxide           | During Combustion |
| Irritant Vapors or Gases | 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

##### 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:**

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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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ FILTEK™ BULK FILL POSTERIOR RESTORATIVE

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

##### Recommended use

Dental Product, Restorative

##### 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

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.

**2.3. Hazards not otherwise classified**

None.

## SECTION 3: Composition/information on ingredients

| Ingredient                             | C.A.S. No.   | % by Wt                |
|--|--------------|------------------------|
| SILANE TREATED CERAMIC                 | 444758-98-9  | 60 - 70 Trade Secret * |
| AROMATIC URETHANE DIMETHACRYLATE       | 1431303-59-1 | 10 - 20 Trade Secret * |
| YTTERBIUM FLUORIDE (YbF <sub>3</sub> ) | 13760-80-0   | 1 - 10 Trade Secret *  |
| DIURETHANE DIMETHACRYLATE (UDMA)       | 72869-86-4   | 1 - 10 Trade Secret *  |
| SILANE TREATED SILICA                  | 248596-91-0  | 1 - 10 Trade Secret *  |
| 1,12-DODECANE DIMETHYCRYLATE (DDDMA)   | 72829-09-5   | < 5 Trade Secret *     |
| SILANE TREATED ZIRCONIA                | Unknown      | < 5 Trade Secret *     |
| WATER                                  | 7732-18-5    | < 5 Trade Secret *     |
| MODIFIED METHACRYLATE MONOMER          | 1429648-13-4 | < 1 Trade Secret *     |
| ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB) | 10287-53-3   | < 0.5 Trade Secret *   |
| BENZOTRIAZOL                           | 96478-09-0   | < 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:**

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

Condition

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.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

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

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



Store away from heat. Store away from 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            |
|------------|------------|--------|--|--------------------------------|
| FLUORIDES  | 13760-80-0 | ACGIH  | TWA(as F):2.5 mg/m3                        | A4: Not class. as human carcin |
| FLUORIDES  | 13760-80-0 | OSHA   | TWA(as dust):2.5 mg/m3;TWA(as F):2.5 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

|                                  |                                     |
|----------------------------------|-------------------------------------|
| <b>General Physical Form:</b>    | Solid                               |
| <b>Specific Physical Form:</b>   | Paste                               |
| <b>Odor, Color, Grade:</b>       | Slight acrylate odor, tooth colored |
| <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>Not Applicable</i>               |

|   |                          |
|---|--------------------------|
| Flammable Limits(UEL)                       | <i>Not Applicable</i>    |
| Vapor Pressure                              | <i>Not Applicable</i>    |
| Vapor Density                               | <i>Not Applicable</i>    |
| Density                                     | 1.9 g/cm <sup>3</sup>    |
| Specific Gravity                            | 1.9 [Ref Std: WATER=1]   |
| Solubility in Water                         | Negligible               |
| Solubility- non-water                       | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water     | <i>Not Applicable</i>    |
| Autoignition temperature                    | <i>No Data Available</i> |
| Decomposition temperature                   | <i>No Data Available</i> |
| Viscosity                                   | <i>No Data Available</i> |
| Molecular weight                            | <i>No Data Available</i> |
| Volatile Organic Compounds                  | <i>No Data Available</i> |
| Percent volatile                            | <i>No Data Available</i> |
| VOC Less H <sub>2</sub> O & Exempt Solvents | <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

High shear and high temperature conditions

### 10.5. Incompatible materials

Strong oxidizing agents

### 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.

### 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:**

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

**Eye Contact:**

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

**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                         | Dermal    | Professional judgment | LD50 not applicable                      |
| Overall product                         | Ingestion | Rat                   | LD50 > 2,000 mg/kg                       |
| SILANE TREATED CERAMIC                  | Dermal    |                       | LD50 estimated to be > 5,000 mg/kg       |
| SILANE TREATED CERAMIC                  | Ingestion |                       | LD50 estimated to be 2,000 - 5,000 mg/kg |
| YTTERBIUM FLUORIDE (YbF3)               | Dermal    | Professional judgment | LD50 estimated to be > 5,000 mg/kg       |
| YTTERBIUM FLUORIDE (YbF3)               | Ingestion | Rat                   | LD50 > 5,000 mg/kg                       |
| DIURETHANE DIMETHACRYLATE (UDMA)        | Dermal    | Professional judgment | LD50 estimated to be > 5,000 mg/kg       |
| DIURETHANE DIMETHACRYLATE (UDMA)        | Ingestion | Rat                   | LD50 > 5,000 mg/kg                       |
| SILANE TREATED SILICA                   | Dermal    |                       | LD50 estimated to be > 5,000 mg/kg       |
| SILANE TREATED SILICA                   | Ingestion |                       | LD50 estimated to be > 5,000 mg/kg       |
| 1,12-DODECANE DIMETHACRYLATE (DDDMA)    | Dermal    | Professional judgment | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 1,12-DODECANE DIMETHACRYLATE (DDDMA)    | Ingestion | similar compounds     | LD50 2000-5000 mg/kg                     |
| ETHYL 4-DIMETHYL AMINO BENZOATE (EDMAB) | Dermal    | Rat                   | LD50 > 2,000 mg/kg                       |
| ETHYL 4-DIMETHYL AMINO BENZOATE (EDMAB) | Ingestion | Rat                   | LD50 > 2,000 mg/kg                       |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                   | Species           | Value                     |
|------------------------|-------------------|---------------------------|
| SILANE TREATED CERAMIC | similar compounds | No significant irritation |
| SILANE TREATED SILICA  | Professional      | No significant irritation |

|   |                      |                           |
|---|----------------------|---------------------------|
|   | nal<br>judgeme<br>nt |                           |
| ETHYL 4-DIMETHYL AMINO BENZOATE (EDMAB) | Rabbit               | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                                    | Species                           | Value                     |
|---|-----------------------------------|---------------------------|
| SILANE TREATED CERAMIC                  | similar<br>compoun<br>ds          | Mild irritant             |
| YTTERBIUM FLUORIDE (YbF3)               | Professio<br>nal<br>judgeme<br>nt | Mild irritant             |
| SILANE TREATED SILICA                   | Professio<br>nal<br>judgeme<br>nt | No significant irritation |
| ETHYL 4-DIMETHYL AMINO BENZOATE (EDMAB) | Rabbit                            | Mild irritant             |

**Skin Sensitization**

| Name                          | Species                  | Value  |
|-------------------------------|--------------------------|--|
| SILANE TREATED CERAMIC        | similar<br>compoun<br>ds | Some positive data exist, but the data are not sufficient for classification |
| MODIFIED METHACRYLATE MONOMER | similar<br>compoun<br>ds | Some positive data exist, but the data are not sufficient for classification |

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

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

**Carcinogenicity**

| Name                   | Route      | Species                  | Value  |
|------------------------|------------|--------------------------|--|
| SILANE TREATED CERAMIC | Inhalation | similar<br>compoun<br>ds | Some positive data exist, but the data are not sufficient for classification |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

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

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

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

**Specific Target Organ Toxicity - repeated exposure**

| Name                   | Route      | Target Organ(s)    | Value  | Species                  | Test Result         | Exposure Duration |
|------------------------|------------|--------------------|--|--------------------------|---------------------|-------------------|
| SILANE TREATED CERAMIC | Inhalation | pulmonary fibrosis | Some positive data exist, but the data are not sufficient for classification | similar<br>compoun<br>ds | NOAEL Not available |                   |

**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. As a disposal alternative, 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.

#### 311/312 Hazard Categories:

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

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

| <u>Ingredient (Category if applicable)</u> | <u>C.A.S. No</u> | <u>Regulation</u>  | <u>Status</u> |
|--|------------------|--|---------------|
| BENZOTRIAZOL                               | 96478-09-0       | Toxic Substances Control Act (TSCA) 5<br>SNUR or Consent Order Chemicals | Applicable    |

This material contains a chemical regulated by an EPA Significant New Use Rule (TSCA Section 5)

| <u>Ingredient (Category if applicable)</u> | <u>C.A.S. No</u> | <u>Reference</u> |
|--|------------------|------------------|
| BENZOTRIAZOL                               | 96478-09-0       | 40CFR721.8450    |

### 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.

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 33-1594-2 | <b>Version Number:</b>  | 6.00     |
| <b>Issue Date:</b>     | 03/22/16  | <b>Supersedes Date:</b> | 02/25/16 |

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 29-8287-4 | <b>Version Number:</b>  | 7.01     |
| <b>Issue Date:</b>     | 06/05/19  | <b>Supersedes Date:</b> | 04/26/19 |

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ Scotchbond™ Universal

#### Product Identification Numbers

LE-F100-1014-6, LE-F100-1014-7, LE-F100-1014-9, 70-2011-3903-0  
7000055178

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

##### Recommended use

Dental Product, Adhesive

##### 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

Flammable Liquid: Category 3.

Serious Eye Damage/Irritation: Category 1.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

Signal word

Danger

### Symbols

Flame | Corrosion | Exclamation mark |

### Pictograms



### Hazard Statements

Flammable liquid and vapor.

Causes serious eye damage.

May cause an allergic skin reaction.

### Precautionary Statements

#### Prevention:

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

Take precautionary measures against static discharge.

Keep container tightly closed.

Wear protective gloves and eye/face protection.

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

#### Response:

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER 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.

### 2.3. Hazards not otherwise classified

May cause chemical gastrointestinal burns.

## SECTION 3: Composition/information on ingredients

| Ingredient   | C.A.S. No.   | % by Wt                |
|--|--------------|------------------------|
| 2-HYDROXYETHYL METHACRYLATE  | 868-77-9     | 15 - 25 Trade Secret * |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)   | 1565-94-2    | 15 - 25 Trade Secret * |
| 2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5) | 1207736-18-2 | 10 - 20 Trade Secret * |



|  |            |                        |
|--|------------|------------------------|
| ETHANOL                                | 64-17-5    | 10 - 15 Trade Secret * |
| WATER                                  | 7732-18-5  | 10 - 15 Trade Secret * |
| COPOLYMER OF ACRYLIC AND ITACONIC ACID | 25948-33-8 | 1 - 5 Trade Secret *   |
| CAMPHORQUINONE                         | 10373-78-1 | < 2 Trade Secret *     |
| DIMETHYLAMINO BENZOAT(-4)              | 10287-53-3 | < 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. Do not induce vomiting. Get immediate 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

Formaldehyde  
Carbon monoxide  
Carbon dioxide  
Irritant Vapors or Gases  
Oxides of Nitrogen

#### Condition

During Combustion  
During Combustion  
During Combustion  
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. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering

for exposed areas of the head.

## 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. Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with detergent and water. 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. 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. Take precautionary measures against static discharge.

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

Store in a well-ventilated place. Keep cool. Keep container tightly closed. 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          |
|------------|------------|--------|--------------------------|------------------------------|
| ETHANOL    | 64-17-5    | ACGIH  | STEL:1000 ppm            | A3: Confirmed animal carcin. |
| ETHANOL    | 64-17-5    | OSHA   | TWA:1900 mg/m3(1000 ppm) |                              |

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>                  | Liquid                                     |
| <b>Specific Physical Form:</b>                 | Viscous Liquid                             |
| <b>Odor, Color, Grade:</b>                     | Characteristic odor, yellow liquid         |
| <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>                           | $\geq 78$ °C                               |
| <b>Flash Point</b>                             | 30.5 °C [ <i>Test Method: Closed Cup</i> ] |
| <b>Evaporation rate</b>                        | <i>No Data Available</i>                   |
| <b>Flammability (solid, gas)</b>               | Not Applicable                             |
| <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>                                 | 1 - 1.2 g/cm <sup>3</sup>                  |
| <b>Specific Gravity</b>                        | 1 - 1.2 [ <i>Ref Std: WATER=1</i> ]        |
| <b>Solubility in Water</b>                     | Appreciable                                |
| <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>Not Applicable</i>                      |
| <b>Molecular weight</b>                        | <i>No Data Available</i>                   |
| <b>Volatile Organic Compounds</b>              | <i>No Data Available</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**

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:**

No health effects are expected.

**Skin Contact:**

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

**Eye Contact:**

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 Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

**Additional Information:**

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human

consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

### 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 >5,000 mg/kg |
| 2-HYDROXYETHYL METHACRYLATE  | Dermal                     | Rabbit                 | LD50 > 5,000 mg/kg                             |
| 2-HYDROXYETHYL METHACRYLATE  | Ingestion                  | Rat                    | LD50 5,564 mg/kg                               |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)   | Ingestion                  |                        | LD50 estimated to be 2,000 - 5,000 mg/kg       |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)   | Dermal                     | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg       |
| ETHANOL  | Dermal                     | Rabbit                 | LD50 > 15,800 mg/kg                            |
| ETHANOL  | Inhalation-Vapor (4 hours) | Rat                    | LC50 124.7 mg/l                                |
| ETHANOL  | Ingestion                  | Rat                    | LD50 17,800 mg/kg                              |
| 2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5) | Dermal                     | Professional judgement | LD50 estimated to be > 5,000 mg/kg             |
| 2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5) | Ingestion                  | Rat                    | LD50 > 2,000 mg/kg                             |
| COPOLYMER OF ACRYLIC AND ITACONIC ACID   | Ingestion                  | Rat                    | LD50 > 5,000 mg/kg                             |
| COPOLYMER OF ACRYLIC AND ITACONIC ACID   | Dermal                     | similar health hazards | LD50 estimated to be > 5,000 mg/kg             |
| CAMPHORQUINONE   | Dermal                     | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg       |
| CAMPHORQUINONE   | Ingestion                  | Rat                    | LD50 > 2,000 mg/kg                             |
| DIMETHYLAMINOENZOAT(-4)  | Dermal                     | Rat                    | LD50 > 2,000 mg/kg                             |
| DIMETHYLAMINOENZOAT(-4)  | Ingestion                  | Rat                    | LD50 > 2,000 mg/kg                             |

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

| Name   | Species       | Value                     |
|--|---------------|---------------------------|
| Overall product  | Rabbit        | No significant irritation |
| 2-HYDROXYETHYL METHACRYLATE  | Rabbit        | Minimal irritation        |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)   | Not available | Minimal irritation        |
| ETHANOL  | Rabbit        | No significant irritation |
| 2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5) | In vitro data | Corrosive                 |
| DIMETHYLAMINOENZOAT(-4)  | Rabbit        | No significant irritation |

#### Serious Eye Damage/Irritation

| Name   | Species       | Value             |
|--|---------------|-------------------|
| Overall product                                      | In vitro data | Corrosive         |
| 2-HYDROXYETHYL METHACRYLATE                          | Rabbit        | Moderate irritant |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Not           | Moderate irritant |

|  |               |                 |
|--|---------------|-----------------|
|  | available     |                 |
| ETHANOL  | Rabbit        | Severe irritant |
| 2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5) | In vitro data | Corrosive       |
| DIMETHYLAMINO BENZOAT(-4)  | Rabbit        | Mild irritant   |

**Skin Sensitization**

| Name   | Species                | Value          |
|--|------------------------|----------------|
| 2-HYDROXYETHYL METHACRYLATE  | Human and animal       | Sensitizing    |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)   | Guinea pig             | Sensitizing    |
| ETHANOL  | Human                  | Not classified |
| 2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5) | 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  |
|--|----------|--|
| 2-HYDROXYETHYL METHACRYLATE  | In vivo  | Not mutagenic  |
| 2-HYDROXYETHYL METHACRYLATE  | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)   | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| ETHANOL  | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| ETHANOL  | In vivo  | Some positive data exist, but the data are not sufficient for classification |
| 2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5) | In Vitro | Not mutagenic  |

**Carcinogenicity**

| Name    | Route     | Species                 | Value  |
|---------|-----------|-------------------------|--|
| ETHANOL | Ingestion | Multiple animal species | 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              |
|--|-----------|--|---------|-----------------------|--------------------------------|
| 2-HYDROXYETHYL METHACRYLATE                          | Ingestion | Not classified for female reproduction | Rat     | NOAEL 1,000 mg/kg/day | prematuring & during gestation |
| 2-HYDROXYETHYL METHACRYLATE                          | Ingestion | Not classified for male reproduction   | Rat     | NOAEL 1,000 mg/kg/day | 49 days                        |
| 2-HYDROXYETHYL METHACRYLATE                          | Ingestion | Not classified for development         | Rat     | NOAEL 1,000 mg/kg/day | prematuring & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not classified for female reproduction | Mouse   | NOAEL 0.8 mg/kg/day   | prematuring & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not classified for male reproduction   | Mouse   | NOAEL 0.8 mg/kg/day   | prematuring & during gestation |
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion | Not classified for development         | Mouse   | NOAEL 0.8 mg/kg/day   | prematuring & during           |

|         |            |                                |     |                       |                                |
|---------|------------|--------------------------------|-----|-----------------------|--------------------------------|
| ETHANOL | Inhalation | Not classified for development | Rat | NOAEL 38 mg/l         | gestation during gestation     |
| ETHANOL | Ingestion  | Not classified for development | Rat | NOAEL 5,200 mg/kg/day | prematuring & during gestation |

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

| Name   | Route      | Target Organ(s)                   | Value  | Species                 | Test Result         | Exposure Duration |
|--|------------|-----------------------------------|--|-------------------------|---------------------|-------------------|
| ETHANOL  | Inhalation | central nervous system depression | May cause drowsiness or dizziness  | Human                   | LOAEL 2.6 mg/l      | 30 minutes        |
| ETHANOL  | Inhalation | respiratory irritation            | Some positive data exist, but the data are not sufficient for classification | Human                   | LOAEL 9.4 mg/l      | not available     |
| ETHANOL  | Ingestion  | central nervous system depression | May cause drowsiness or dizziness  | Multiple animal species | NOAEL not available |                   |
| ETHANOL  | Ingestion  | kidney and/or bladder             | Not classified   | Dog                     | NOAEL 3,000 mg/kg   |                   |
| 2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5) | Inhalation | respiratory irritation            | May cause respiratory irritation   | similar health hazards  | NOAEL Not available |                   |
| COPOLYMER OF ACRYLIC AND ITACONIC ACID   | Ingestion  | nervous system                    | Not classified   | Rat                     | NOAEL 5,000 mg/kg   |                   |

#### Specific Target Organ Toxicity - repeated exposure

| Name   | Route      | Target Organ(s)  | Value  | Species | Test Result           | Exposure Duration              |
|--|------------|--|--|---------|-----------------------|--------------------------------|
| BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | Ingestion  | endocrine system   liver   nervous system   kidney and/or bladder  | Not classified   | Mouse   | NOAEL 0.8 mg/kg/day   | prematuring & during gestation |
| ETHANOL  | Inhalation | liver  | Some positive data exist, but the data are not sufficient for classification | Rabbit  | LOAEL 124 mg/l        | 365 days                       |
| ETHANOL  | Inhalation | hematopoietic system   immune system   | Not classified   | Rat     | NOAEL 25 mg/l         | 14 days                        |
| ETHANOL  | Ingestion  | liver  | Some positive data exist, but the data are not sufficient for classification | Rat     | LOAEL 8,000 mg/kg/day | 4 months                       |
| ETHANOL  | Ingestion  | kidney and/or bladder  | Not classified   | Dog     | NOAEL 3,000 mg/kg/day | 7 days                         |
| COPOLYMER OF ACRYLIC AND ITACONIC ACID               | Ingestion  | endocrine system   hematopoietic system   liver  | Not classified   | Rat     | NOAEL 200 mg/kg/day   | 28 days                        |
| COPOLYMER OF ACRYLIC AND ITACONIC ACID               | Ingestion  | heart   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system | Not classified   | Rat     | NOAEL 2,000 mg/kg/day | 28 days                        |

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

**EPA Hazardous Waste Number (RCRA):** D001 (Ignitable), D035 (Methyl ethyl ketone)

## 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

Hazard Not Otherwise Classified (HNOC)

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: 3 Flammability: 3 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> | 29-8287-4 | <b>Version Number:</b>  | 7.01     |
| <b>Issue Date:</b>     | 06/05/19  | <b>Supersedes Date:</b> | 04/26/19 |

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
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| <b>Issue Date:</b>     | 01/19/18  | <b>Supersedes Date:</b> | 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

|                      |   |
|----------------------|---|
| <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

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.

| Ingredient           | C.A.S. No. | Agency | Limit type  | Additional Comments |
|----------------------|------------|--------|---|---------------------|
| 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 ATE <sub>2,000</sub> - 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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