## **SAFETY DATA SHEETS**

# This SDS packet was issued with item:

075036439

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

075034202 075035001 075035019 075035027 075035035 075035506 075035514 075035522 075035530 075035548 075035555 075036322 075036405 075038625 075038633 075038641 075038658 075038666 075038674 075038682 075038690 075038732 075038740 075038757 079367442 079367444 079367446 079367450 079367452 079367458 079367461 079367464 079367467 079367478 079367481 273007026 273009774 273015030 273016431 273016443 273020314 273022590 273023185



# **Safety Data Sheet**

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 Document Group:
 18-0262-8
 Version Number:
 10.00

 Issue Date:
 09/11/19
 Supercedes Date:
 01/17/18

## **SECTION 1: Identification**

### 1.1. Product identifier

3M<sup>TM</sup> ESPE<sup>TM</sup> RelyX<sup>TM</sup> Unicem Aplicap/Maxicap Powder

#### **Product Identification Numbers**

 ID Number
 UPC
 ID Number
 UPC

 LE-FSF6-5681-1
 LE-FSF6-5681-2

LE-FSFD-5682-2

## 1.2. Recommended use and restrictions on use

### Recommended use

Dental Product, Universal luting material.

## Restrictions on use

For use only by dental professionals.

## 1.3. Supplier's details

MANUFACTURER: 3M

**DIVISION:** Oral Care Solutions Division

**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA **Telephone:** 1-888-3M HELPS (1-888-364-3577)

### 1.4. Emergency telephone number

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

# **SECTION 2: Hazard identification**

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

## 2.1. Hazard classification

Serious Eve Damage/Irritation: Category 2A.

Respiratory Sensitizer: Category 1. Skin Sensitizer: Category 1. Carcinogenicity: Category 2.

#### 2.2. Label elements

### Signal word

Danger

### **Symbols**

Health Hazard |

### **Pictograms**



#### **Hazard Statements**

Causes serious eye irritation.

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

May cause an allergic skin reaction.

Suspected of causing cancer.

### **Precautionary Statements**

#### **Prevention:**

Obtain special instructions before use.

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

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

In case of inadequate ventilation wear respiratory protection.

Wear protective gloves and eye/face protection.

Wash thoroughly after handling.

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

#### Response:

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

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

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

Continue rinsing.

If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water.

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

Wash contaminated clothing before reuse.

IF exposed or concerned: Get medical advice/attention.

## Disposal:

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

# **SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
Glass powder (65997-17-3), surface modified with 2-	None	85 - 95 Trade Secret *
propenoic acid, 2 methyl3-(trimethoxysilyl)propyl ester		
(2530-85-0), bulk material		
SILANE TREATED SILICA	122334-95-6	1 - 10 Trade Secret *
CALCIUM HYDROXIDE	1305-62-0	< 3 Trade Secret *
SUBSTITUTED PYRIMIDINE	72846-00-5	1 - 5 Trade Secret *

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SODIUM PERSULFATE	7775-27-1	< 1 Trade Secret *
Titanium Dioxide	13463-67-7	< 0.5 Trade Secret *

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

## **SECTION 4: First aid measures**

## 4.1. Description of first aid measures

#### Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

#### Skin Contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

## **Eye Contact:**

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

#### If Swallowed:

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

### 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

## **SECTION 5: Fire-fighting measures**

#### 5.1. Suitable extinguishing media

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

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

None inherent in this product.

## **Hazardous Decomposition or By-Products**

Substance
None known.

**Condition** 

**During Combustion** 

## 5.3. Special protective actions for fire-fighters

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. 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

Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not get in eyes. Use personal protective equipment (gloves, respirators, etc.) as required. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

## 7.2. Conditions for safe storage including any incompatibilities

No special storage requirements.

# **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

## Occupational exposure limits

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

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

ACGIH: American Conference of Governmental Industrial Hygienists

AIHA: American Industrial Hygiene Association

CMRG: Chemical Manufacturer's Recommended Guidelines

OSHA: United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use in a well-ventilated area.

## 8.2.2. Personal protective equipment (PPE)

## Eye/face protection

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

Safety Glasses with side shields

#### Skin/hand protection

See Section 7.1 for additional information on skin protection.

## **Respiratory protection**

None required.

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

**Appearance** 

Physical state Solid Color Multicolor

**Specific Physical Form:** Powder **Odor** Odorless

**Odor threshold** No Data Available pН Not Applicable Melting point No Data Available **Boiling Point** Not Applicable Flash Point No flash point **Evaporation rate** Not Applicable Flammability (solid, gas) Not Classified Flammable Limits(LEL) No Data Available Flammable Limits(UEL) No Data Available Vapor Pressure Not Applicable **Vapor Density** Not Applicable **Density** > 1 g/ml

Specific Gravity

No Data Available

Solubility in Water Negligible

Solubility- non-waterNo Data AvailablePartition coefficient: n-octanol/ waterNo Data AvailableAutoignition temperatureNot ApplicableDecomposition temperatureNo Data AvailableViscosityNot ApplicableMolecular weightNo Data AvailableVolatile Organic CompoundsNot Applicable

## **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

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

## 10.2. Chemical stability

Stable.

# 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

**Substance** 

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:

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

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

May cause additional health effects (see below).

#### **Skin Contact:**

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

#### **Eye Contact:**

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

### **Ingestion:**

May be harmful if swallowed.

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

### **Additional Health Effects:**

#### **Carcinogenicity:**

Contains a chemical or chemicals which can cause cancer.

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

## **Toxicological Data**

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

## **Acute Toxicity**

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3-(trimethoxysilyl)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 methyl3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
CALCIUM HYDROXIDE	Dermal	Rabbit	LD50 > 2,500 mg/kg
CALCIUM HYDROXIDE	Ingestion	Rat	LD50 7,340 mg/kg
SUBSTITUTED PYRIMIDINE	Dermal	Professio nal judgeme nt	LD50 estimated to be 2,000 - 5,000 mg/kg
SUBSTITUTED PYRIMIDINE	Ingestion	Rat	LD50 > 2,000 mg/kg
SODIUM PERSULFATE	Dermal	Rabbit	LD50 > 10,000 mg/kg
SODIUM PERSULFATE	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 47.93 mg/l
SODIUM PERSULFATE	Ingestion	Rat	LD50 895 mg/kg
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

## Skin Corrosion/Irritation

Name	Species	Value
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3-	Professio	No significant irritation
(trimethoxysilyl)propyl ester (2530-85-0), bulk material	nal	
	judgeme	
	nt	
SILANE TREATED SILICA	Rabbit	No significant irritation
CALCIUM HYDROXIDE	Human	Corrosive
Titanium Dioxide	Rabbit	No significant irritation

**Serious Eye Damage/Irritation** 

Name	Species	Value
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3-(trimethoxysilyl)propyl ester (2530-85-0), bulk material	Professio nal judgeme nt	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
CALCIUM HYDROXIDE	Rabbit	Corrosive
Titanium Dioxide	Rabbit	No significant irritation

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### **Skin Sensitization**

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

## **Respiratory Sensitization**

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

**Germ Cell Mutagenicity** 

our mountaines,			
Name	Route	Value	
SILANE TREATED SILICA	In Vitro	Not mutagenic	
SUBSTITUTED PYRIMIDINE	In Vitro	Not mutagenic	
Titanium Dioxide	In Vitro	Not mutagenic	
Titanium Dioxide	In vivo	Not mutagenic	

Carcinogenicity

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

## **Reproductive Toxicity**

Reproductive and/or Developmental Effects

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

## Target Organ(s)

Specific Target Organ Toxicity - single exposure

specific ranger organ	1 Oxicity 5	mgie exposure				
Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CALCIUM HYDROXIDE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 2.5 mg/m3	20 minutes
SUBSTITUTED PYRIMIDINE	Ingestion	nervous system	Not classified	Rat	NOAEL 2,000 mg/kg	

**Specific Target Organ Toxicity - repeated exposure** 

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

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Titanium Dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not	occupational
					available	exposure

### **Aspiration Hazard**

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

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

# **SECTION 12: Ecological information**

## **Ecotoxicological information**

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

### **Chemical fate information**

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

# **SECTION 13: Disposal considerations**

### 13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility.

EPA Hazardous Waste Number (RCRA): Not regulated

# **SECTION 14: Transport Information**

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

# **SECTION 15: Regulatory information**

## 15.1. US Federal Regulations

Contact 3M for more information.

## **EPCRA 311/312 Hazard Classifications:**

Physical Hazards	
Not applicable	

# Health Hazards

Carcinogenicity

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

## 15.2. State Regulations

Contact 3M for more information.

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## 15.3. Chemical Inventories

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

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

Contact 3M for more information.

## 15.4. International Regulations

Contact 3M for more information.

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

## **SECTION 16: Other information**

NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 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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**PRODUCT NAME:** 3M<sup>TM</sup> ESPE<sup>TM</sup> RelyX<sup>TM</sup> Unicem 2 Automix Refill

**MANUFACTURER:** 3M

**DIVISION:** 3M ESPE Dental Products

**ADDRESS:** 3M Center

St. Paul, MN 55144-1000

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

**Issue Date:** 09/02/10 **Supercedes Date:** 06/02/10

**Document Group:** 28-3754-0

### **ID** Number(s):

70-2011-3637-4, 70-2011-3638-2, 70-2011-3639-0

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:

28-1380-6, 28-1333-5

**Revision Changes:** 

Kit: Component document group number(s) was modified.

Kit initial issue message was modified.

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## **SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** 3M<sup>TM</sup> ESPE<sup>TM</sup> RelyX<sup>TM</sup> UNICEM 2 AUTOMIX CATALYST

**MANUFACTURER:** 3M

**DIVISION:** 3M ESPE Dental Products

ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

**Issue Date:** 09/17/13 **Supercedes Date:** 05/16/11

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

**Product Use:** 

Intended Use: Dental Product

Limitations on Use: For use only by dental professionals.

Specific Use: Dental cement

# **SECTION 2: INGREDIENTS**

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
SILANE TREATED GLASS POWDER	None	55 - 65
SUBSTITUTED DIMETHACRYLATE	27689-12-9	20 - 30
1-BENZYL-5-PHENYL-BARBIC-ACID, CALCIUM SALT	None	< 5
SILANE TREATED SILICA	68909-20-6	< 5
SODIUM P-TOLUENESULFINATE	824-79-3	< 5
1,12-DODECANE DIMETHYCRYLATE	72829-09-5	< 5
CALCIUM HYDROXIDE	1305-62-0	< 2
METHACRYLATED ALIPHATIC AMINE	93962-70-0	< 1.0
METHACRYLATED ALIPHATIC AMINE	93962-71-1	< 1.0
TITANIUM DIOXIDE	13463-67-7	< 0.5

# **SECTION 3: HAZARDS IDENTIFICATION**

## 3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: tooth-colored pastes with slight acrylic odor

General Physical Form: Solid

**Immediate health, physical, and environmental hazards:** May cause allergic skin reaction. This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

## 3.2 POTENTIAL HEALTH EFFECTS

## **Eye Contact:**

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

#### **Skin Contact:**

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

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

#### **Inhalation:**

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

#### **Ingestion:**

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

## **SECTION 4: FIRST AID MEASURES**

## 4.1 FIRST AID PROCEDURES

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

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

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

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

## **SECTION 5: FIRE FIGHTING MEASURES**

## 5.1 FLAMMABLE PROPERTIES

Autoignition temperatureNo Data AvailableFlash PointNo flash pointFlammable Limits(LEL)No Data AvailableFlammable Limits(UEL)No Data Available

## 5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

## 5.3 PROTECTION OF FIRE FIGHTERS

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**Special Fire Fighting Procedures:** Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

**Unusual Fire and Explosion Hazards:** Non-flammable: ordinary combustible material.

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air.

## 6.2. Environmental precautions

Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

#### Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Clean up residue.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

# **SECTION 7: HANDLING AND STORAGE**

## 7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid skin contact. Wash hands after handling and before eating. 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. Avoid eye contact with dust or airborne particles.

### 7.2 STORAGE

Store away from heat. Store out of direct sunlight.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation.

## **8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)**

## 8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields

## 8.2.2 Skin Protection

Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

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#### 8.2.3 Respiratory Protection

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

#### 8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not ingest. Wash hands after handling and before eating.

## 8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<b>Authority</b>	<b>Type</b>	<u>Limit</u>	<b>Additional Information</b>
CALCIUM HYDROXIDE	ACGIH	TWA	5 mg/m3	
CALCIUM HYDROXIDE	OSHA	TWA, respirable	5 mg/m3	
		fraction		
CALCIUM HYDROXIDE	OSHA	TWA, as total dust	15 mg/m3	
Limestone	OSHA	TWA, respirable	5 mg/m3	
		fraction		
Limestone	OSHA	TWA, as total dust	15 mg/m3	
TITANIUM DIOXIDE	ACGIH	TWA	10 mg/m3	
TITANIUM DIOXIDE	CMRG	TWA, as respirable	5 mg/m3	
		dust		
TITANIUM DIOXIDE	OSHA	TWA, as total dust	15 mg/m3	

### SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Specific Physical Form:** Paste

Odor, Color, Grade: tooth-colored pastes with slight acrylic odor

General Physical Form: Solid

Autoignition temperatureNo Data AvailableFlash PointNo flash pointFlammable Limits(LEL)No Data AvailableFlammable Limits(UEL)No Data AvailableBoiling PointNo Data AvailableDensity2 - 2.2 g/cm3Vapor DensityNo Data Available

Vapor Pressure No Data Available

**Specific Gravity** 2 - 2.2 [*Ref Std:* WATER=1]

pH Not ApplicableMelting point No Data Available

Solubility in Water Nil

Evaporation rateNo Data AvailableKow - Oct/Water partition coefNo Data AvailablePercent volatileNo Data AvailableViscosityNo Data Available

# **SECTION 10: STABILITY AND REACTIVITY**

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

None known

Hazardous Polymerization: Hazardous polymerization will not occur.

## **Hazardous Decomposition or By-Products**

<u>Substance</u> <u>Condition</u>

Carbon monoxideDuring CombustionCarbon dioxideDuring CombustionIrritant Vapors or GasesDuring Combustion

## **SECTION 11: TOXICOLOGICAL INFORMATION**

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

## **SECTION 12: ECOLOGICAL INFORMATION**

### ECOTOXICOLOGICAL INFORMATION

Not determined.

## CHEMICAL FATE INFORMATION

Not determined.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

Waste Disposal Method: As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

EPA Hazardous Waste Number (RCRA): Not regulated

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

# **SECTION 14:TRANSPORT INFORMATION**

LE-F100-0785-6, LE-F100-0785-9

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

## **SECTION 15: REGULATORY INFORMATION**

#### US FEDERAL REGULATIONS

Contact 3M for more information.

### 311/312 Hazard Categories:

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

## STATE REGULATIONS

Contact 3M for more information.

## **CHEMICAL INVENTORIES**

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

Contact 3M for more information.

#### INTERNATIONAL REGULATIONS

Contact 3M for more information.

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

## **SECTION 16: OTHER INFORMATION**

### **NFPA Hazard Classification**

Health: 2 Flammability: 0 Reactivity: 0 Special Hazards: None

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

## **Revision Changes:**

Section 1: Product use information information was modified.

Section 10: Hazardous decomposition or by-products table information was modified.

Section 9: Density information information was modified.

Section 9: Vapor density value information was modified.

Section 9: Vapor pressure value information was modified.

Section 9: Boiling point information information was modified.

Section 5: Flammable limits (UE) information information was modified.

Section 5: Flammable limits (LEL) information information was modified.

Section 5: Autoignition temperature information information was modified.

Section 5: Flash point information information was modified.

Section 9: Property description for optional properties information was modified.

Section 9: Specific gravity information information was modified.

Section 9: pH information information was modified.

Section 9: Melting point information information was modified.

Section 9: Solubility in water text information was modified.

Section 9: Flash point information information was modified.

Section 9: Flammable limits (LEL) information information was modified.

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Section 9: Flammable limits (UEL) information information was modified.

Section 9: Autoignition temperature information information was modified.

Section 2: Ingredient table information was modified.

Section 8: Exposure guidelines ingredient information information was modified.

Copyright information was modified.

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## **SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** 3M<sup>TM</sup> ESPE<sup>TM</sup> RelyX<sup>TM</sup> UNICEM 2 AUTOMIX Base Paste

**MANUFACTURER:** 3M

**DIVISION:** 3M ESPE Dental Products

ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

**Issue Date:** 04/17/13 **Supercedes Date:** 03/15/12

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

**Product Use:** 

Intended Use: Dental Product

Limitations on Use: For use only by dental professionals.

Specific Use: Dental cement

# **SECTION 2: INGREDIENTS**

<u>Ingredient</u>	C.A.S. No.	<u>% by Wt</u>
SILANE TREATED GLASS POWDER	None	45 - 55
2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-	1224866-76-5	20 - 30
ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-		
PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE		
TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)	109-16-0	10 - 20
SILANE TREATED SILICA	68909-20-6	1 - 10
SODIUM PERSULFATE	7775-27-1	< 3
GLASS POWDER	65997-17-3	< 3
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	13122-18-4	< 0.5
Cooper (II) acetate monohydrate	6046-93-1	< 0.08

# **SECTION 3: HAZARDS IDENTIFICATION**

## 3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: toothcolored paste with slight acrylic odor

General Physical Form: Solid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause allergic respiratory reaction. This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

## 3.2 POTENTIAL HEALTH EFFECTS

## **Eye Contact:**

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

#### **Skin Contact:**

Moderate 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.

#### Inhalation:

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

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

#### Ingestion

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

## **SECTION 4: FIRST AID MEASURES**

## 4.1 FIRST AID PROCEDURES

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

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

**Skin Contact:** Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. If signs/symptoms develop, get medical attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

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

## **SECTION 5: FIRE FIGHTING MEASURES**

## 5.1 FLAMMABLE PROPERTIES

Autoignition temperatureNo Data AvailableFlash PointNo flash pointFlammable Limits(LEL)No Data AvailableFlammable Limits(UEL)No Data Available

## 5.2 EXTINGUISHING MEDIA

Ordinary combustible material. Use fire extinguishers with class A extinguishing agents (e.g., water, foam).

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### 5.3 PROTECTION OF FIRE FIGHTERS

**Special Fire Fighting Procedures:** Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Ventilate the area with fresh air.

#### **6.2.** Environmental precautions

Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

#### Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Clean up residue.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

## **SECTION 7: HANDLING AND STORAGE**

### 7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Wash hands after handling and before eating. Wash contaminated clothing thoroughly before re-use. Discard contaminated leather clothing. 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.

## 7.2 STORAGE

Store away from heat. Store out of direct sunlight. Store away from areas where product may come into contact with food or pharmaceuticals.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 ENGINEERING CONTROLS

Do not use in a confined area or areas with little or no air movement.

## **8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)**

### 8.2.1 Eve/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Safety Glasses with side shields

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#### 8.2.2 Skin Protection

Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

### 8.2.3 Respiratory Protection

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

## 8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable. Do not ingest. Wash hands after handling and before eating.

#### 8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<b>Authority</b>	<b>Type</b>	<u>Limit</u>	<b>Additional Information</b>
GLASS POWDER	Manufacturer	TWA, as dust	$\overline{10 \text{ mg/m3}}$	
	determined			
PERSULFATE COMPOUNDS	ACGIH	TWA, as persulfate	0.1  mg/m3	

#### SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Specific Physical Form:** Paste

Odor, Color, Grade: toothcolored paste with slight acrylic odor

General Physical Form: Solid

Autoignition temperatureNo Data AvailableFlash PointNo flash pointFlammable Limits(LEL)No Data AvailableFlammable Limits(UEL)No Data AvailableBoiling PointNo Data AvailableDensity2 - 2.2 g/cm3Vapor DensityNo Data Available

Vapor Pressure No Data Available

**Specific Gravity** 2 - 2.2 [*Ref Std:* WATER=1]

pH Not ApplicableMelting point No Data Available

Solubility in Water Negligible

Evaporation rateNo Data AvailableKow - Oct/Water partition coefNo Data AvailablePercent volatileNo Data AvailableViscosityNo Data Available

## **SECTION 10: STABILITY AND REACTIVITY**

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Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

None known

Hazardous Polymerization: Hazardous polymerization will not occur.

## **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

# **SECTION 11: TOXICOLOGICAL INFORMATION**

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

## **SECTION 12: ECOLOGICAL INFORMATION**

## ECOTOXICOLOGICAL INFORMATION

Not determined.

## CHEMICAL FATE INFORMATION

Not determined.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

**Waste Disposal Method:** For quantities <100 lbs. (50kg): dispose of waste product in a sanitary landfill. For larger quantities: incinerate in an industrial or commercial facility in the presence of a combustible material.

EPA Hazardous Waste Number (RCRA): Not regulated

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

## **SECTION 14:TRANSPORT INFORMATION**

LE-F100-0787-3, LE-F100-0787-4

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

## **SECTION 15: REGULATORY INFORMATION**

## US FEDERAL REGULATIONS

Contact 3M for more information.

#### 311/312 Hazard Categories:

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

#### STATE REGULATIONS

Contact 3M for more information.

#### CHEMICAL INVENTORIES

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

Contact 3M for more information.

## INTERNATIONAL REGULATIONS

Contact 3M for more information.

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

## **SECTION 16: OTHER INFORMATION**

## **NFPA Hazard Classification**

Health: 2 Flammability: 0 Reactivity: 0 Special Hazards: None

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

### **Revision Changes:**

Section 3: Potential effects from skin contact information was modified.

Section 3: Potential effects from inhalation information was modified.

Section 7: Handling information was modified.

Section 8: Engineering controls information was modified.

Section 4: First aid for skin contact - medical assistance - was modified.

Section 4: First aid for ingestion (swallowing) - medical assistance - was modified.

Section 9: Property description for optional properties was modified.

Section 2: Ingredient table was modified.

Section 6: Personal precautions information was modified.

Copyright was modified.

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MATERIAL SAFETY DATA SHEET 3M <sup>TM</sup> ESPE <sup>TM</sup> RelyX <sup>TM</sup> UNICEM 2 AUTOMIX Base Paste 04/17/13
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# **Safety Data Sheet**

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 Document Group:
 17-9608-5
 Version Number:
 8.00

 Issue Date:
 09/11/19
 Supercedes Date:
 01/19/18

## **SECTION 1: Identification**

### 1.1. Product identifier

 $3M^{TM}$  ESPETM RELYXTM UNICEMTM APLICAP/MAXICAP LIQUID

#### **Product Identification Numbers**

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

### 1.2. Recommended use and restrictions on use

## Recommended use

Dental Product, For use by dental professionals.

## 1.3. Supplier's details

MANUFACTURER: 3M

**DIVISION:** Oral Care Solutions Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA

**Telephone:** 1-888-3M HELPS (1-888-364-3577)

## 1.4. Emergency telephone number

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

# **SECTION 2: Hazard identification**

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

## 2.1. Hazard classification

Flammable Liquid: Category 4.

Serious Eye Damage/Irritation: Category 1.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

Signal word

Danger

### **Symbols**

Corrosion | Exclamation mark |





## **Hazard Statements**

Combustible liquid.

Causes serious eye damage.

May cause an allergic skin reaction.

## **Precautionary Statements**

#### **Prevention:**

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

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

Wear protective gloves and eye/face protection.

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

#### **Response:**

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

Continue rinsing.

IF ON SKIN: Wash with plenty of soap and water.

Immediately call a POISON CENTER or doctor/physician.

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

Wash contaminated clothing before reuse.

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

extinguish.

## Storage:

Store in a well-ventilated place. Keep cool.

### Disposal:

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

# **SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
2,6-DI-TERT-BUTYL-P-CRESOL	128-37-0	< 0.5
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	< 0.2
mixture of mono-, di- and tri-glycerin-dimethacrylate-	1224866-76-5	40 - 50 Trade Secret *
ester of phosphoric acid		
TRIETHYLENE GLYCOL DIMETHACRYLATE	109-16-0	20 - 35 Trade Secret *
SUBSTITUTED DIMETHACRYLATE	27689-12-9	20 - 30 Trade Secret *
Methyl Methacrylate	80-62-6	< 0.5 Trade Secret *

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

## **SECTION 4: First aid measures**

\_\_\_\_\_

### 4.1. Description of first aid measures

#### Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

#### **Skin Contact:**

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

### **Eye Contact:**

Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately get medical attention.

#### If Swallowed:

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

## 4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

#### 4.3. Indication of any immediate medical attention and special treatment required

Not applicable

# **SECTION 5: Fire-fighting measures**

### 5.1. Suitable extinguishing media

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

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

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

### **Hazardous Decomposition or By-Products**

SubstanceConditionCarbon monoxideDuring CombustionCarbon dioxideDuring 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. Collect as much of the spilled material as possible using non-sparking tools. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

# **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Do not get in eyes.

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

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

# **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

#### Occupational exposure limits

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
2,6-DI-TERT-BUTYL-P-	128-37-0	ACGIH	TWA(inhalable fraction and	A4: Not class. as human
CRESOL			vapor):2 mg/m3	carcin
COPPER COMPOUNDS	6046-93-1	ACGIH	TWA(as Cu dust or mist):1 mg/m3;TWA(as Cu, fume):0.2 mg/m3	
Methyl Methacrylate	80-62-6	ACGIH	TWA:50 ppm;STEL:100 ppm	Dermal Sensitizer, A4: Not class. as human carcin
Methyl Methacrylate	80-62-6	OSHA	TWA:410 mg/m3(100 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

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### 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

**Appearance** 

Physical stateLiquidColorYellow

**Specific Physical Form: Odor**Liquid
Acrylate

**Odor threshold** No Data Available

**pH** 2.3

Melting point No Data Available

**Boiling Point** > 200 °F

Flash Point 64 °C [Test Method: Tagliabue Closed Cup]

Evaporation rateNo Data AvailableFlammability (solid, gas)Not ApplicableFlammable Limits(LEL)No Data AvailableFlammable Limits(UEL)No Data AvailableVapor PressureNo Data AvailableVapor DensityNo Data Available

**Density** 1.14 g/ml

Specific Gravity 1.14 [Ref Std: WATER=1]

Solubility In Water < 63 g/l

Solubility- non-waterNo Data AvailablePartition coefficient: n-octanol/ waterNo Data AvailableAutoignition temperatureNo Data AvailableDecomposition temperatureNo Data AvailableViscosityNo Data AvailableMolecular weightNo Data AvailablePercent volatileNo Data Available

# **SECTION 10: Stability and reactivity**

## 10.1. Reactivity

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

## 10.2. Chemical stability

Stable.

## 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

## 10.4. Conditions to avoid

Heat

#### 10.5. Incompatible materials

None known.

## 10.6. Hazardous decomposition products

**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:**

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

#### **Ingestion:**

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

## **Toxicological Data**

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

#### Acute Toxicity

Acute Toxicity			
Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	Dermal		LD50 estimated to be > 5,000 mg/kg
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	Ingestion	Rat	LD50 > 2,000 mg/kg
TRIETHYLENE GLYCOL DIMETHACRYLATE	Dermal	Professio nal	LD50 estimated to be > 5,000 mg/kg

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TRIETHYLENE GLYCOL DIMETHACRYLATE	Ingestion	Rat	LD50 10,837 mg/kg
SUBSTITUTED DIMETHACRYLATE	Dermal	Professio	LD50 estimated to be > 5,000 mg/kg
		nal	
		judgeme	
		nt	
SUBSTITUTED DIMETHACRYLATE	Ingestion	Rat	LD50 > 17,600 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
Methyl Methacrylate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Methyl Methacrylate	Inhalation-	Rat	LC50 29 mg/l
	Vapor (4		
	hours)		
Methyl Methacrylate	Ingestion	Rat	LD50 7,900 mg/kg

ATE = acute toxicity estimate

## Skin Corrosion/Irritation

Name	Species	Value
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	Rabbit	Minimal irritation
TRIETHYLENE GLYCOL DIMETHACRYLATE	Guinea	Mild irritant
	pig	
SUBSTITUTED DIMETHACRYLATE	Rabbit	No significant irritation
2,6-DI-TERT-BUTYL-P-CRESOL	Human	Minimal irritation
	and	
	animal	
Methyl Methacrylate	Human	Mild irritant
	and	
	animal	

**Serious Eye Damage/Irritation** 

Name	Species	Value
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	Rabbit	Corrosive
TRIETHYLENE GLYCOL DIMETHACRYLATE	Professio	Moderate irritant
	nal	
	judgeme	
	nt	
SUBSTITUTED DIMETHACRYLATE	Rabbit	Mild irritant
2,6-DI-TERT-BUTYL-P-CRESOL	Rabbit	Mild irritant
Methyl Methacrylate	Rabbit	Moderate irritant

## **Skin Sensitization**

Name	Species	Value
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	Guinea	Not classified
	pig	
TRIETHYLENE GLYCOL DIMETHACRYLATE	Human	Sensitizing
	and	
	animal	
SUBSTITUTED DIMETHACRYLATE	Guinea	Not classified
	pig	
2,6-DI-TERT-BUTYL-P-CRESOL	Human	Not classified
Methyl Methacrylate	Human	Sensitizing
	and	
	animal	

**Respiratory Sensitization** 

Name	Species	Value
Methyl Methacrylate	Human	Not classified

# **Germ Cell Mutagenicity**

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Name	Route	Value
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	In Vitro	Not mutagenic
TRIETHYLENE GLYCOL DIMETHACRYLATE	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
SUBSTITUTED DIMETHACRYLATE	In Vitro	Not mutagenic
2,6-DI-TERT-BUTYL-P-CRESOL	In Vitro	Not mutagenic
2,6-DI-TERT-BUTYL-P-CRESOL	In vivo	Not mutagenic
Methyl Methacrylate	In vivo	Not mutagenic
Methyl Methacrylate	In Vitro	Some positive data exist, but the data are not
		sufficient for classification

Carcinogenicity

Name	Route	Species	Value
TRIETHYLENE GLYCOL DIMETHACRYLATE	Dermal	Mouse	Not carcinogenic
2,6-DI-TERT-BUTYL-P-CRESOL	Ingestion	Multiple	Some positive data exist, but the data are not
		animal	sufficient for classification
		species	
Methyl Methacrylate	Ingestion	Rat	Not carcinogenic
Methyl Methacrylate	Inhalation	Human	Not carcinogenic
		and	
		animal	

# Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
TRIETHYLENE GLYCOL DIMETHACRYLATE	Ingestion	Not classified for female reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
TRIETHYLENE GLYCOL DIMETHACRYLATE	Ingestion	Not classified for male reproduction	Mouse	NOAEL 1 mg/kg/day	1 generation
TRIETHYLENE GLYCOL DIMETHACRYLATE	Ingestion	Not classified for development	Mouse	NOAEL 1 mg/kg/day	1 generation
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
Methyl Methacrylate	Inhalation	Not classified for male reproduction	Mouse	NOAEL 36.9 mg/l	
Methyl Methacrylate	Inhalation	Not classified for development	Rat	NOAEL 8.3 mg/l	during organogenesi s

# Target Organ(s)

Specific Target Organ Toxicity - single exposure

ď	specific runger organ romenty single exposure						
ĺ	Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure
ı							Duration
ſ	Methyl Methacrylate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not	occupational
						available	exposure

**Specific Target Organ Toxicity - repeated exposure** 

specific Target Organ Toxicity - Teperated exposure						
Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure
						Duration
TRIETHYLENE	Dermal	kidney and/or	Not classified	Mouse	NOAEL 833	78 weeks
GLYCOL		bladder   blood			mg/kg/day	
DIMETHACRYLATE		·				
2,6-DI-TERT-BUTYL-P-	Ingestion	liver	Some positive data exist, but the	Rat	NOAEL 250	28 days
CRESOL			data are not sufficient for		mg/kg/day	
			classification			
2,6-DI-TERT-BUTYL-P-	Ingestion	kidney and/or	Not classified	Rat	NOAEL 500	2 generation

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CRESOL		bladder			mg/kg/day	
2,6-DI-TERT-BUTYL-P-	Ingestion	blood	Not classified	Rat	LOAEL 420	40 days
CRESOL					mg/kg/day	
2,6-DI-TERT-BUTYL-P-	Ingestion	endocrine system	Not classified	Rat	NOAEL 25	2 generation
CRESOL					mg/kg/day	
2,6-DI-TERT-BUTYL-P-	Ingestion	heart	Not classified	Mouse	NOAEL	10 weeks
CRESOL					3,480	
					mg/kg/day	
Methyl Methacrylate	Dermal	peripheral nervous	Not classified	Human	NOAEL Not	occupational
		system			available	exposure
Methyl Methacrylate	Inhalation	olfactory system	Causes damage to organs through	Human	NOAEL Not	occupational
			prolonged or repeated exposure		available	exposure
Methyl Methacrylate	Inhalation	kidney and/or	Not classified	Multiple	NOAEL Not	14 weeks
		bladder		animal	available	
				species		
Methyl Methacrylate	Inhalation	liver	Not classified	Mouse	NOAEL 12.3	14 weeks
					mg/l	
Methyl Methacrylate	Inhalation	respiratory system	Not classified	Human	NOAEL Not	occupational
					available	exposure

### **Aspiration Hazard**

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

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

# **SECTION 12: Ecological information**

## **Ecotoxicological information**

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

## **Chemical fate information**

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

# **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility.

EPA Hazardous Waste Number (RCRA): Not regulated

## **SECTION 14: Transport Information**

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

# **SECTION 15: Regulatory information**

## 15.1. US Federal Regulations

Contact 3M for more information.

### 3MTM ESPETM RELYXTM UNICEMTM APLICAP/MAXICAP LIQUID

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#### **EPCRA 311/312 Hazard Classifications:**

### Physical Hazards

Flammable (gases, aerosols, liquids, or solids)

### **Health Hazards**

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

## 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

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

Contact 3M for more information.

## 15.4. International Regulations

Contact 3M for more information.

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

## **SECTION 16: Other information**

### NFPA Hazard Classification

Health: 3 Flammability: 2 Instability: 0 Special Hazards: None

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

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