

Safety Data Sheet

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Product identifier 3MTMESPETM 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

Telephone:

MANUFACTURER:	3M
DIVISION:	3M ESPE Dental Products
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA

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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Document Group:	29-8287-4	Version Number:	8.00
Issue Date:	03/09/20	Supercedes Date:	02/21/20

SECTION 1: Identification

1.1. Product identifier

3MTM ScotchbondTM Universal (41258)

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.

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1 2 0

1.5. Supplier's details		
MANUFACTURER:	3M	
DIVISION:	Oral Care Solutions Division	
ADDRESS:	3M Center, St. Paul, MN 55144-1000, US	δA
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 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	1565-94-2	15 - 25 Trade Secret *
DIMETHACRYLATE (BISGMA)		
2-PROPENOIC ACID, 2-METHYL-, REACTION	1207736-18-2	10 - 20 Trade Secret *
PRODUCTS WITH 1,10-DECANEDIOL AND		
PHOSPHOROUS OXIDE (P2O5)		

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ETHANOL	64-17-5	10 - 15 Trade Secret *
WATER	7732-18-5	10 - 15 Trade Secret *
2-PROPENOIC ACID, 2-METHYL-, 3-	122334-95-6	7 - 13 Trade Secret *
(TRIMETHOXYSILYL)PROPYL ESTER, REACTION		
PRODUCTS WITH VITREOUS SILICA		
COPOLYMER OF ACRYLIC AND ITACONIC ACID	25948-33-8	1 - 5 Trade Secret *
CAMPHORQUINONE	10373-78-1	< 2 Trade Secret *
DIMETHYLAMINOBENZOAT(-4)	10287-53-3	< 2 Trade Secret *
(DIMETHYLAMINO)ETHYL METHACRYLATE	2867-47-2	< 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:

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

<u>Substance</u>	<u>Condition</u>
Formaldehyde	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Irritant Vapors or Gases	During Combustion
Oxides of Nitrogen	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 that is resistant to polar solvents 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. Take precautionary measures against static discharge. 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. 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)	
		.		1

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	Liquid
Color	Yellow
Specific Physical Form:	Viscous Liquid
Odor	Characteristic Odor
Odor threshold	No Data Available
рН	Not Applicable
Melting point	No Data Available
Boiling Point	>= 78 °C
Flash Point	30.5 °C [<i>Test Method</i> :Closed Cup]
Evaporation rate	No Data Available
Flammability (solid, gas) Not Applicable	
Flammable Limits(LEL) No Data Available	
Flammable Limits(UEL) No Data Available	
Vapor Pressure	No Data Available
Vapor Density No Data Available	
Density 1 - 1.2 g/cm3	
Specific Gravity	1 - 1.2 [<i>Ref Std</i> :WATER=1]
Solubility in Water	Appreciable
Solubility- non-water No Data Available	
Partition coefficient: n-octanol/ water No Data Available	
Autoignition temperature No Data Available	
Decomposition temperature No Data Available	
Viscosity Not Applicable	
Molecular weight	No Data Available
Volatile Organic Compounds	No Data Available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

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

10.4. Conditions to avoid Heat

10.5. Incompatible materials None known.

10.6. Hazardous decomposition products <u>Substance</u>

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure. The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:

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)	Dermal	Professio nal judgeme nt	LD50 estimated to be > 5,000 mg/kg
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Ingestion	Rat	LD50 > 11,700 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	Professio nal judgeme nt	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
2-PROPENOIC ACID, 2-METHYL-, 3- (TRIMETHOXYSILYL)PROPYL ESTER, REACTION PRODUCTS WITH VITREOUS SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-PROPENOIC ACID, 2-METHYL-, 3- (TRIMETHOXYSILYL)PROPYL ESTER, REACTION PRODUCTS WITH VITREOUS SILICA	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
2-PROPENOIC ACID, 2-METHYL-, 3- (TRIMETHOXYSILYL)PROPYL ESTER, REACTION PRODUCTS WITH VITREOUS SILICA	Ingestion	Rat	LD50 > 5,110 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	Professio nal judgeme nt	LD50 estimated to be 2,000 - 5,000 mg/kg
CAMPHORQUINONE	Ingestion	Rat	LD50 > 2,000 mg/kg
DIMETHYLAMINOBENZOAT(-4)	Dermal	Rat	LD50 > 2,000 mg/kg
DIMETHYLAMINOBENZOAT(-4)	Ingestion	Rat	LD50 > 2,000 mg/kg
(DIMETHYLAMINO)ETHYL METHACRYLATE	Dermal	Rat	LD50 > 2,000 mg/kg
(DIMETHYLAMINO)ETHYL METHACRYLATE	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 0.436 mg/l
(DIMETHYLAMINO)ETHYL METHACRYLATE	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)	Rabbit	No significant irritation
ETHANOL	Rabbit	No significant irritation
2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-	In vitro	Corrosive
DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5)	data	
2-PROPENOIC ACID, 2-METHYL-, 3-(TRIMETHOXYSILYL)PROPYL	Rabbit	No significant irritation
ESTER, REACTION PRODUCTS WITH VITREOUS SILICA		
DIMETHYLAMINOBENZOAT(-4)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Overall product	In vitro	Corrosive
	data	
2-HYDROXYETHYL METHACRYLATE	Rabbit	Moderate irritant
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	In vitro	No significant irritation
	data	
ETHANOL	Rabbit	Severe irritant
2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-	In vitro	Corrosive
DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5)	data	
2-PROPENOIC ACID, 2-METHYL-, 3-(TRIMETHOXYSILYL)PROPYL	Rabbit	No significant irritation
ESTER, REACTION PRODUCTS WITH VITREOUS SILICA		
DIMETHYLAMINOBENZOAT(-4)	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
2-HYDROXYETHYL METHACRYLATE	Human	Sensitizing
	and	
	animal	
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Mouse	Not classified
ETHANOL	Human	Not classified
2-PROPENOIC ACID, 2-METHYL-, REACTION PRODUCTS WITH 1,10-	Professio	Sensitizing
DECANEDIOL AND PHOSPHOROUS OXIDE (P2O5)	nal	
	judgeme	
	nt	
2-PROPENOIC ACID, 2-METHYL-, 3-(TRIMETHOXYSILYL)PROPYL	Human	Not classified
ESTER, REACTION PRODUCTS WITH VITREOUS SILICA	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

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	Not mutagenic
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
2-PROPENOIC ACID, 2-METHYL-, 3-(TRIMETHOXYSILYL)PROPYL ESTER, REACTION PRODUCTS WITH VITREOUS SILICA	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
ETHANOL	Ingestion	Multiple	Some positive data exist, but the data are not
		animal	sufficient for classification
		species	
2-PROPENOIC ACID, 2-METHYL-, 3-	Not	Mouse	Some positive data exist, but the data are not
(TRIMETHOXYSILYL)PROPYL ESTER, REACTION	Specified		sufficient for classification
PRODUCTS WITH VITREOUS SILICA	_		

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	premating & 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	premating & during gestation
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	during gestation
ETHANOL	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
ETHANOL	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation
2-PROPENOIC ACID, 2-METHYL-, 3- (TRIMETHOXYSILYL)PROPYL ESTER, REACTION PRODUCTS WITH VITREOUS SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
2-PROPENOIC ACID, 2-METHYL-, 3- (TRIMETHOXYSILYL)PROPYL ESTER, REACTION PRODUCTS WITH VITREOUS SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
2-PROPENOIC ACID, 2-METHYL-, 3- (TRIMETHOXYSILYL)PROPYL ESTER, REACTION PRODUCTS WITH VITREOUS 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

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	Ingestion	nervous system	Not classified	Rat	NOAEL	

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ACRYLIC AND			5,000 mg/kg	
ITACONIC ACID				

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 hematopoietic system liver heart skin gastrointestinal tract bone, teeth, nails, and/or hair immune system muscles nervous system eyes kidney and/or bladder respiratory system vascular system	Not classified	Rat	NOAEL 1,000 mg/kg/day	90 days
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
2-PROPENOIC ACID, 2- METHYL-, 3- (TRIMETHOXYSILYL)P ROPYL ESTER, REACTION PRODUCTS WITH VITREOUS SILICA	Inhalation	respiratory system silicosis	Not classified	Human	NOAEL Not available	occupational exposure
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, utilize an acceptable permitted waste disposal 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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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:

EFCRA 511/512 Hazaru 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.

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

SECTION 1: Identification

1.1. Product identifier

3MTM ESPETM RelyXTM 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 rest	ctions on use
Recommended use	
Dental Product, Cement	
Restrictions on use	
For use only by dental professiona	S.
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 numb 1-800-364-3577 or (651) 737-650	r (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 10/23/18

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	None	50 - 70 Trade Secret *
MODIFIED WITH 2-PROPENOIC ACID, 2		
METHYL3-(TRIMETHOXISILYL)PROPYL ESTER		
(2530-85-0), BULK MATERIAL		
SUBSTITUTED DIMETHACRYLATE	27689-12-9	10 - 30 Trade Secret *
1,12-DODECANE DIMETHYCRYLATE	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-	93962-70-0	< 0.5
HYDROXYETHYL)(3-		
METHOXYPROPYL)AMINO]ETHYL ESTER		
TITANIUM OXIDE	13463-67-7	< 0.5 Trade Secret *

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*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> Carbon monoxide Carbon dioxide Irritant Vapors or Gases <u>Condition</u> 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.

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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.

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
CALCIUM HYDROXIDE	1305-62-0	ACGIH	TWA:5 mg/m3	
CALCIUM HYDROXIDE	1305-62-0	OSHA	TWA(as total dust):15	
			mg/m3; I WA(respirable	
			fraction):5 mg/m3	
TITANIUM OXIDE	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human
				carcin
TITANIUM OXIDE	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
SILICA, AMORPHOUS	68909-20-6	OSHA	TWA concentration:0.8	
			mg/m3;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

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	tooth-colored pastes with slight acrylic odor
Odor threshold	No Data Available
рН	Not Applicable
Melting point	No Data Available
Boiling Point	No Data Available
Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	2 - 2.2 g/cm3
Specific Gravity	2 - 2.2 [<i>Ref Std</i> :WATER=1]
Solubility in Water	Nil
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Molecular weight	No Data Available
Percent volatile	No Data Available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

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None known.

10.6. Hazardous decomposition products <u>Substance</u>

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.

Ingredient	CAS No.	Class Description	Regulation
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.

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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	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
2-PROPENOIC ACID, 2 METHYL3-			
(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK			
MATERIAL	To a set i su		
2-PROPENOIC ACID 2 METHYL - 3-	Ingestion		LDS0 estimated to be 2,000 - 5,000 mg/kg
(TRIMETHOXISILYL)PROPYL ESTER (2530-85-0). BULK			
MATERIAL			
SUBSTITUTED DIMETHACRYLATE	Dermal	Professio	LD50 estimated to be > 5,000 mg/kg
		nal	
		Judgeme	
SUBSTITUTED DIMETHACPYLATE	Indestion	ni Rat	1.050 > 17.600 mg/kg
1 12-DODECANE DIMETHYCRYLATE	Dermal	Professio	$LD50 \approx 17,000$ mg/kg LD50 estimated to be 2 000 - 5 000 mg/kg
	Definar	nal	
		judgeme	
		nt	
1,12-DODECANE DIMETHYCRYLATE	Ingestion	similar	LD50 2000-5000 mg/kg
		compoun	
BARBITURIC ACID DERIVATE	Dermal	Professio	L D50 estimated to be 2 000 - 5 000 mg/kg
Briddrokie Keid Dektyrrie	Dermai	nal	2,000 5,000 mg/kg
		judgeme	
		nt	
BARBITURIC ACID DERIVATE	Ingestion	Rat	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	(4 hours)		
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
SODIUM P-TOLUENESULFINATE	Dermal	Professio	LD50 estimated to be 2,000 - 5,000 mg/kg
		nal	
		judgeme	
SODILIM D TOL LIENESLIL EINATE	Ingestion	nt Pot	LD50 2 200 mg/kg
	Dermal	Rabbit	LD30 = 3,200 mg/kg
CALCIUM HYDROXIDE	Ingestion	Rat	LD50 7 340 mg/kg
METHACRYLATED ALIPHATIC AMINE	Dermal	Professio	LD50 estimated to be $> 5.000 \text{ mg/kg}$
		nal	
		judgeme	
	x	nt	
METHACKYLATED ALIPHATIC AMINE	Ingestion	Rat	LD50 > 1,600 mg/kg
2,6-DL-TERT-BUTYL-P-CRESOL	Ingestion	Rat	LD30 > 2,000 mg/kg
TITANIUM OXIDE	Dermal	Rabbit	LD50 > 2,950 mg/kg LD50 > 10,000 mg/kg
TITANIUM OXIDE	Inhalation-	Rat	LC50 > 6.82 mg/l
	Dust/Mist		
	(4 hours)		
TITANIUM OXIDE	Ingestion	Rat	LD50 > 10,000 mg/kg
2-PROPENOIC ACID, 2-METHYL-, 2-[(2-	Dermal	Professio	LD50 estimated to be $>$ 5,000 mg/kg
FSTER		nai judgeme	
		nt	
2-PROPENOIC ACID, 2-METHYL-, 2-[(2-	Ingestion	Rat	LD50 > 400 mg/kg
HYDROXYETHYL)(3- METHOXYPROPYL)AMINO]ETHYL			
ESTER			

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name

Species Value

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GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-	Professio	No significant irritation
PROPENOIC ACID, 2 METHYL3-(TRIMETHOXISILYL)PROPYL ESTER	nal	
(2530-85-0), BULK MATERIAL	judgeme	
	nt	
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	Minimal irritation
	and	
	animal	
TITANIUM OXIDE	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-	Professio	No significant irritation
PROPENOIC ACID, 2 METHYL3-(TRIMETHOXISILYL)PROPYL ESTER	nal	
(2530-85-0), BULK MATERIAL	judgeme	
	nt	
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	Not classified
	pig	
BARBITURIC ACID DERIVATE	Mouse	Not classified
SILANE TREATED SILICA	Human	Not classified
	and	
	animal	
METHACRYLATED ALIPHATIC AMINE	Professio	Sensitizing
	nal	
	judgeme	
	nt	
2,6-DI-TERT-BUTYL-P-CRESOL	Human	Not classified
TITANIUM OXIDE	Human	Not classified
	and	
	animal	
2-PROPENOIC ACID, 2-METHYL-, 2-[(2-HYDROXYETHYL)(3-	Professio	Sensitizing
METHOXYPROPYL)AMINO]ETHYL ESTER	nal	
	judgeme	
	nt	

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
--	------	-------	---------	-------

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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 organogenesi s
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

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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

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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

3MTM ESPETM RelyXTM UNICEM 2 AUTOMIX Base Paste

Product Identification Numbers

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

1.2. Recommended use and restrictions on use

Recommended use Dental Product, Cement Restrictions on use For use only by dental professionals.

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

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

2.1. Hazard classification Skin Sensitizer: Category 1.

2.2. Label elements Signal word Warning

Symbols

3MTM ESPETM RelyXTM UNICEM 2 AUTOMIX Base Paste 01/19/18

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-	None	45 - 55 Trade Secret *
propenoic acid, 2 methyl3-(trimethoxysilyl)propyl ester		
(2530-85-0) and phenyltrimethoxy silane (2996-92-1),		
bulk material		
2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-	1224866-76-5	20 - 30 Trade Secret *
(HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER,		
REACTION PRODUCTS WITH 2-HYDROXY-1,3-		
PROPANEDIYL DIMETHACRYLATE AND		
PHOSPHORUS OXIDE		
TRIETHYLENE GLYCOL DIMETHACRYLATE	109-16-0	10 - 20 Trade Secret *
(TEGDMA)		
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-	13122-18-4	< 0.5 Trade Secret *
TRIMETHYLHEXANOATE		
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.

Condition

During Combustion During Combustion During Combustion

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<u>Substance</u>
Carbon monoxide
Carbon dioxide
Irritant Vapors or Gases

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

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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/m3;TWA(as Cu, fume):0.2	
			mg/m3	
SILICA, AMORPHOUS	68909-20-6	OSHA	TWA concentration:0.8	
			mg/m3;TWA:20 millions of	
			particles/cu. ft.	
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

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	toothcolored paste with slight acrylic odor
Odor threshold	No Data Available
рН	Not Applicable
Melting point	No Data Available
Boiling Point	No Data Available
Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	2 - 2.2 g/cm3
Specific Gravity	2 - 2.2 [<i>Ref Std</i> :WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Molecular weight	No Data Available
Percent volatile	No Data Available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid Heat

10.5. Incompatible materials None known.

10.6. Hazardous decomposition products

Substance 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

Condition

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

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure. The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:

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

Skin Contact:

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

Eye Contact:

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

Ingestion:

May be harmful if swallowed.

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3-(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 methyl3-(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	Professio nal judgeme nt	LD50 estimated to be > 5,000 mg/kg
TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)	Ingestion	Rat	LD50 10,837 mg/kg

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SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
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-	Rat	LC50 > 47.93 mg/l
	Dust/Mist		
	(4 hours)		
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-	Rat	LC50 > 0.8 mg/l
	Dust/Mist		
	(4 hours)		
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	Ingestion	Rat	LD50 12,905 mg/kg
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 methyl3-	Professio	No significant irritation
(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-	nal	
1), bulk material	judgeme	
	nt	
2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-	Rabbit	Minimal irritation
ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-		
PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE		
TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)	Guinea	Mild irritant
	pig	
SILANE TREATED SILICA	Rabbit	No significant irritation
OXIDE GLASS CHEMICALS (non-fibrous)	Professio	No significant irritation
	nal	
	judgeme	
	nt	
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Or arall and dust		No significant invitation
Overan product		No significant initiation
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3-	Professio	No significant irritation
(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-	nal	
1), bulk material	judgeme	
	nt	
2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1-(HYDROXYMETHYL)-1,2-	Rabbit	Corrosive
ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-		
PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE		
TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)	Professio	Moderate irritant
	nal	
	judgeme	
	nt	
SILANE TREATED SILICA	Rabbit	No significant irritation
OXIDE GLASS CHEMICALS (non-fibrous)	Professio	No significant irritation
	nal	-
	judgeme	
	nt	
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-	Guinea	Not classified
ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3-	pig	

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

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	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

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

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	Dermal	kidney and/or	Not classified	Mouse	NOAEL 833	78 weeks
GLYCOL		bladder blood			mg/kg/day	
DIMETHACRYLATE						
(TEGDMA)						
SILANE TREATED	Inhalation	respiratory system	Not classified	Human	NOAEL Not	occupational
SILICA		silicosis			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.

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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Safety Data Sheet

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Issue Date:	03/22/16	Supercedes Date:	02/25/16

SECTION 1: Identification

1.1. Product identifier

3MTM ESPETM FILTEKTM 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

3M
Oral Care Solutions Division
3M Center, St. Paul, MN 55144-1000, USA
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 (YbF3)	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

<u>Substance</u>					
Carbon monoxide					
Carbon dioxide					

<u>Condition</u> 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

General Physical Form:
Specific Physical Form:
Odor, Color, Grade:
Odor threshold
рН
Melting point
Boiling Point
Flash Point
Evaporation rate
Flammability (solid, gas)
Flammable Limits(LEL)

Solid Paste Slight acrylate odor, tooth colored *No Data Available Not Applicable Not Applicable* No flash point *Not Applicable* Not Classified *Not Applicable*

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Flammable Limits(UEL)	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Density	1.9 g/cm3
Specific Gravity	1.9 [<i>Ref Std:</i> WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	Not Applicable
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Molecular weight	No Data Available
Volatile Organic Compounds	No Data Available
Percent volatile	No Data Available
VOC Less H2O & Exempt Solvents	No Data Available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid Heat 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	Professio	LD50 not applicable
		nal	
		judgeme	
Overall product	Ingestion	Rat	LD50 > 2.000 mg/kg
SILANE TREATED CERAMIC	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
SILANE TREATED CERAMIC	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
YTTERBIUM FLUORIDE (YbF3)	Dermal	Professio	LD50 estimated to be > 5,000 mg/kg
		nal	
		judgeme	
		nt	
YTTERBIUM FLUORIDE (YbF3)	Ingestion	Rat	LD50 > 5,000 mg/kg
DIURETHANE DIMETHACRYLATE (UDMA)	Dermal	Professio	LD50 estimated to be $> 5,000 \text{ mg/kg}$
		iudaeme	
		nt	
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 DIMETHYCRYLATE (DDDMA)	Dermal	Professio	LD50 estimated to be 2,000 - 5,000 mg/kg
		nal	
		judgeme	
	T	nt · · ·	1 D50, 2000, 5000
1,12-DODECANE DIMETHYCKYLATE (DDDMA)	ingestion	similar	LD50 2000-5000 mg/kg
		ds	
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Dermal	Rat	LD50 > 2,000 mg/kg
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
SILANE TREATED CERAMIC	similar	No significant irritation
	compoun	
	ds	
SILANE TREATED SILICA	Professio	No significant irritation

	nt	
ETHYL 4-DIMETHYL AMINOBENZOATE (EDMAB)	Rabbit	No significant irritation

Serious Eye Damage/Irritation

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

Skin Sensitization

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

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	Some positive data exist, but the data are not
		compoun	sufficient for classification
		ds	

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	Inhalation	pulmonary fibrosis	Some positive data exist, but the	similar	NOAEL Not	
CERAMIC			data are not sufficient for	compoun	available	
			classification	ds		

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]:

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

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

Ingredient (Category if applicable)	<u>C.A.S. No</u>	Reference
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.

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