SAFETY DATA SHEETS

This SDS packet was issued with item:

075036421

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

075036413

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).

075036405



Safety Data Sheet

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

Product identifier

3MTM ESPETM RelyXTM Unicem 2 Automix Refill

ID Number(s):

 $41 - 8650 - 3082 - 3, \\ 41 - 8650 - 3083 - 1, \\ 41 - 8650 - 3084 - 9, \\ 70 - 2011 - 3637 - 4, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4031 - 9, \\ 70 - 2011 - 4032 - 7, \\ 70 - 2011 - 4030 - 1, \\ 70 - 2011 - 4000 - 1, \\ 70 - 2011 - 4000 - 1, \\ 70 - 2010 - 1, \\ 70 - 2011 - 4000 - 1, \\ 70 - 2011 - 4000 - 1, \\ 70 - 2011 - 4000 - 1, \\ 70 - 2011 - 4000 - 1, \\ 70 - 2011 - 4000 - 1, \\ 70 - 2010 - 1, \\ 70 - 2010 - 1, \\ 70 - 2010 - 1, \\ 70 - 2010 - 1, \\ 70 - 2010 - 1, \\ 70 - 2010 - 1, \\ 70 - 2010 - 1, \\ 70 - 2010 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70 - 200 - 1, \\ 70$

Recommended use

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

Supplier's details

MANUFACTURER:	3M
DIVISION:	Oral Care Solutions Division

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

Emergency telephone number

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

28-1333-5, 28-1380-6

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In addition, information obtained from a database may not be as current as the information in the SDS available directly from3M

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



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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 NumbersID NumberUPCLE-F100-0785-6	ID Number LE-F100-0785-9	UPC
1.2. Recommended use and restrict	ons on use	
Recommended use Dental Product, Cement Restrictions on use For use only by dental professionals.		
1.3. Supplier's details MANUFACTURER: DIVISION: ADDRESS: Telephone:	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 (2	4 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;TWA(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 2-PROPENOIC ACID, 2 METHYL3- (TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL	Dermal		LD50 estimated to be > 5,000 mg/kg
GLASS POWDER (65997-17-3), SURFACE MODIFIED WITH 2-PROPENOIC ACID, 2 METHYL3- (TRIMETHOXISILYL)PROPYL ESTER (2530-85-0), BULK MATERIAL	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
SUBSTITUTED DIMETHACRYLATE	Dermal	Professio nal judgeme nt	LD50 estimated to be > 5,000 mg/kg
SUBSTITUTED DIMETHACRYLATE	Ingestion	Rat	LD50 > 17,600 mg/kg
1,12-DODECANE DIMETHYCRYLATE	Dermal	Professio nal judgeme nt	LD50 estimated to be 2,000 - 5,000 mg/kg
1,12-DODECANE DIMETHYCRYLATE	Ingestion	similar compoun ds	LD50 2000-5000 mg/kg
BARBITURIC ACID DERIVATE	Dermal	Professio nal judgeme nt	LD50 estimated to be 2,000 - 5,000 mg/kg
BARBITURIC ACID DERIVATE	Ingestion	Rat	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
SODIUM P-TOLUENESULFINATE	Dermal	Professio nal judgeme nt	LD50 estimated to be 2,000 - 5,000 mg/kg
SODIUM P-TOLUENESULFINATE	Ingestion	Rat	LD50 3,200 mg/kg
CALCIUM HYDROXIDE	Dermal	Rabbit	LD50 > 2,500 mg/kg
CALCIUM HYDROXIDE	Ingestion	Rat	LD50 7,340 mg/kg
METHACRYLATED ALIPHATIC AMINE	Dermal	Professio nal judgeme nt	LD50 estimated to be > 5,000 mg/kg
METHACRYLATED ALIPHATIC AMINE	Ingestion	Rat	LD50 > 1,600 mg/kg
2,6-DI-TERT-BUTYL-P-CRESOL	Dermal	Rat	LD50 > 2,000 mg/kg
2,6-DI-TERT-BUTYL-P-CRESOL	Ingestion	Rat	LD50 > 2,930 mg/kg
TITANIUM OXIDE	Dermal	Rabbit	LD50 > 10,000 mg/kg
TITANIUM OXIDE	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
TITANIUM OXIDE	Ingestion	Rat	LD50 > 10,000 mg/kg
2-PROPENOIC ACID, 2-METHYL-, 2-[(2- HYDROXYETHYL)(3- METHOXYPROPYL)AMINO]ETHYL ESTER	Dermal	Professio nal judgeme nt	LD50 estimated to be > 5,000 mg/kg
2-PROPENOIC ACID, 2-METHYL-, 2-[(2- HYDROXYETHYL)(3- METHOXYPROPYL)AMINO]ETHYL ESTER ATE = acute toxicity estimate	Ingestion	Rat	LD50 > 400 mg/kg

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.

Document Group:	28-1333-5	Version Number:	7.00
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Safety Data Sheet

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

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 Divisi	ion
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- propenoic acid, 2 methyl3-(trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-1), bulk material	None	45 - 55 Trade Secret *
2-PROPENOIC ACID, 2-METHYL-, 1,1'-[1- (HYDROXYMETHYL)-1,2-ETHANEDIYL] ESTER, REACTION PRODUCTS WITH 2-HYDROXY-1,3- PROPANEDIYL DIMETHACRYLATE AND PHOSPHORUS OXIDE	1224866-76-5	20 - 30 Trade Secret *
TRIETHYLENE GLYCOL DIMETHACRYLATE (TEGDMA)	109-16-0	10 - 20 Trade Secret *
SILANE TREATED SILICA	68909-20-6	1 - 10 Trade Secret *
OXIDE GLASS CHEMICALS (non-fibrous)	65997-17-3	< 3 Trade Secret *
SODIUM PERSULFATE	7775-27-1	< 3 Trade Secret *
TERT-BUTYL PEROXY-3,5,5- TRIMETHYLHEXANOATE	13122-18-4	< 0.5 Trade Secret *
Acetic acid, copper(2+) salt, monohydrate	6046-93-1	< 0.1 Trade Secret *

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin Contact:

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

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

<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

<u>Condition</u> During Combustion During Combustion During Combustion

Condition

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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 od			
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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Dermal	Rabbit	LD50 > 5,000 mg/kg
Inhalation-	Rat	LC50 > 0.691 mg/l
Dust/Mist		
(4 hours)		
Ingestion	Rat	LD50 > 5,110 mg/kg
Dermal		LD50 estimated to be $>$ 5,000 mg/kg
Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Dermal	Rabbit	LD50 > 10,000 mg/kg
Inhalation-	Rat	LC50 > 47.93 mg/l
Dust/Mist		
(4 hours)		
Ingestion	Rat	LD50 895 mg/kg
Dermal	Rat	LD50 > 2,000 mg/kg
Inhalation-	Rat	LC50 > 0.8 mg/l
Dust/Mist		
(4 hours)		
Ingestion	Rat	LD50 12,905 mg/kg
	Inhalation- Dust/Mist (4 hours)IngestionDermalIngestionDermalInhalation- Dust/Mist (4 hours)IngestionDermalInhalation- Dust/Mist (4 hours)Inhalation- Dust/Mist (4 hours)	Inhalation- Dust/Mist (4 hours)RatIngestionRatDermalIngestionIngestionDermalDermalRabbitInhalation- Dust/Mist (4 hours)RatDermalRatInhalation- Dust/Mist (4 hours)RatInhalation- Dust/Mist (4 hours)Rat

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
Overall product		No significant irritation
Glass powder (65997-17-3), surface modified with 2-propenoic acid, 2 methyl3- (trimethoxysilyl)propyl ester (2530-85-0) and phenyltrimethoxy silane (2996-92-	Professio nal	No significant irritation
1), bulk material	judgeme	
i), buik material	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 Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

Reproductive Toxicity

Reproductive and/or Developmental Effects

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