SAFETY DATA SHEETS

This SDS packet was issued with item: 075036439

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

075034202 075034210 075034228 075035001 075035019 075035027 075035035 075035506 075035514 075035522 075035530 075035548 075035555 075036322 075036405 075036413 075036421 075038625 075038633 075038641 075038658 075038666 075038674 075038682 075038690 075038732 075038740 075038757 079367442 079367444 079367446 079367450 079367452 079367458 079367461 079367464 079367467 079367478 079367481 273007026 273009774 273015030 273016431 273016443 273020314 273022590 273023185

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MSDS Manufacturer Number:	18-0262-8
MANUFACTURER NAME:	3M
DIVISION:	3M ESPE Dental Products
ADDRESS:	3M Center St. Paul, MN 55144-1000
EMERGENCY PHONE:	1-800-364-3577 or (651) 737-6501 (24 hours)
ISSUED:	02/24/10
SUPERSEDES:	09/10/03
Specific Use:	Dental universal luting material.
Intended Use:	Dental Product Limitations on Use: For use only by dental professionals.

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ADDRESS:	DM Constant	
ADDRESS:	3M Center	
ADDRESS CITY:	St. Paul,	
ADDRESS STATE:	MN	
ADDRESS ZIP:	55144-1000	
BUSINESS PHONE:	1-800-364-3577 or (651) 737-6501 (24 hours)	
PRODUCT NAME:	3M ESPE RelyX Unicem Aplicap/Maxicap Powder	
TRADE NAME:	3MTM ESPETM RelyXTM UnicemTM Aplicap/Maxicap Powder	

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient Name	CAS#	Ingredient Percent
SILANIZED GLASS POWDER	65997-17-3	85 - 95 by Weight
SILANE TREATED SILICA	122334-95-6	5 - 10 by Weight
SUBSTITUTED PYRIMIDINE	Trade Secret	1 - 5 by Weight
CALCIUM HYDROXIDE	1305-62-0	1 - 5 by Weight
SODIUM PERSULFATE	7775-27-1	< 1 by Weight

SECTION 3 - HAZARDS IDENTIFICATION

Specific Physical Form:	Powder
Odor, Color, Grade:	Odorless powders of different colors.
General Physical Form:	Solid
Immediate health, physical, and environmental hazards:	May cause allergic skin reaction. May cause allergic respiratory reaction. Contains a chemical or chemicals which can cause cancer. 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.
EYE CONTACT:	Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.
SKIN CONTACT:	Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.
INHALATION:	Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.
INGESTION:	Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.
Carcinogenicity:	Contains a chemical or chemicals which can cause cancer.
Carcinogenicity of Ingredients:	GLASSWOOL FIBERS (AIRBORNE PARTICLES OF RESPIRABLE SIZE): (CAS: NONE; Class Description: Grp. 2B: Possible human carc.; Regulation: International Agency for Research on Cancer;) GLASSWOOL FIBERS (AIRBORNE PARTICLES OF RESPIRABLE SIZE): (CAS: NONE; Liass Description: Anticipated human carcinogen; Regulation: National Toxicology Program Carcinogens;)

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:	Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.
SKIN CONTACT:	Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.
INHALATION:	Remove person to fresh air. If signs/symptoms develop, get medical attention.

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	ESTION: Do not induce vomiting unless instructed to do so by medical perso Give victim two glasses of water. Never give anything by mouth to unconscious person. Get medical attention. Aid Comments: The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are follo			
First Aid Comments:				
SECTION 5 - FIRE FIGHT	TING MEASURES			
AUTOIGNITION TEMPERATURE:	Not Applicable			
FLASH POINT:	Not Applicable			
FLAMMABLE LIMITS - LEL:	No Data Available			
FLAMMABLE LIMITS - UEL:	No Data Available			
EXTINGUISHING MEDIA:	Non-combustible. Choose material suitable for surrounding fire.			
SPECIAL FIRE FIGHTING PROCEDURES:	Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).			
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Not applicable.			
Note:	See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.			
SECTION 6 - ACCIDENT	AL RELEASE MEASURES			
Accidental Release Measures:	Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Upserve precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up. Clean up residue. In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.			
	LOTODIOF			
SECTION 7 - HANDLING	and STORAGE Avoid eye contact. Avoid prolonged or repeated skin contact.			
HANDLING:				
HANDLING: STORAGE: SECTION 8 - EXPOSURE	Avoid eye contact. Avoid prolonged or repeated skin contact.			
HANDLING: STORAGE: SECTION 8 - EXPOSURE Guideline Info:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3			
HANDLING: STORAGE: SECTION 8 - EXPOSURE SUIDELINES Guideline Info: Ingredient:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS			
HANDLING: STORAGE: SECTION 8 - EXPOSURE GUIDELINES Guideline Info: Ingredient: Guideline Type:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate			
HANDLING: STORAGE: SECTION 8 - EXPOSURE GUIDELINES Guideline Info: Ingredient: Guideline Type: Guideline Info:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3			
HANDLING: STORAGE: SECTION 8 - EXPOSURE SUIDELINES Guideline Info: Ingredient: Suideline Type: Guideline Info: Guideline Type:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust			
HANDLING: STORAGE: SECTION 8 - EXPOSURE GUIDELINES Guideline Info: Ingredient: Guideline Type: Guideline Type: Guideline Info:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3			
HANDLING: STORAGE: SECTION 8 - EXPOSURE Guideline Info: Ingredient: Guideline Type: Guideline Info: Guideline Info: Guideline Info: Ingredient:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER			
AANDLING: STORAGE: SECTION 8 - EXPOSURE UIDELINES Guideline Info: (ngredient: Guideline Type: Guideline Type: Guideline Info: Guideline Info: Guideline Info: Guideline Type:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER 3M TWA, as dust			
HANDLING: STORAGE: SECTION 8 - EXPOSURE SUIDELINES Guideline Info: Guideline Type: Guideline Type: Guideline Type: Guideline Info: Guideline Info: Guideline Type: Guideline Type: Guideline Type: Guideline Type: Guideline Type:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER 3M TWA, as dust CALCIUM HYDROXIDE			
HANDLING: STORAGE: SECTION 8 - EXPOSURE GUIDELINES Guideline Info: Guideline Type: Guideline Type: Guideline Type: Guideline Info: Guideline Type: Guideline Type: Guideline Type: Guideline Type:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER 3M TWA, as dust CALCIUM HYDROXIDE ACGIH TWA			
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HANDLING: STORAGE: SECTION 8 - EXPOSURE UIDELINES Guideline Info: Guideline Type: Guideline Type: Guideline Info: Guideline Type: Guideline Type:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER 3M TWA, as dust CALCIUM HYDROXIDE ACGIH TWA 5 mg/m3 CALCIUM HYDROXIDE			
HANDLING: STORAGE: SECTION 8 - EXPOSURE GUIDELINES Guideline Info: Ingredient: Guideline Type: Guideline Type: Guideline Type: Ingredient: Guideline Type: Guideline Type: Guideline Type: Guideline Type: Guideline Type: Guideline Type: Guideline Info: Ingredient: Guideline Type:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER 3M TWA, as dust CALCIUM HYDROXIDE ACGIH TWA 5 mg/m3 CALCIUM HYDROXIDE OSHA TWA, respirable fraction			
HANDLING: STORAGE: SECTION 8 - EXPOSURE GUIDELINES Guideline Info: Ingredient: Guideline Type: Guideline Type: Guideline Type: Ingredient: Guideline Type: Guideline Type: Guideline Type: Guideline Info: Ingredient: Guideline Info:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER 3M TWA, as dust CALCIUM HYDROXIDE ACGIH TWA 5 mg/m3 CALCIUM HYDROXIDE OSHA TWA, respirable fraction 5 mg/m3			
HANDLING: STORAGE: SECTION 8 - EXPOSURE GUIDELINES Guideline Info: Ingredient: Guideline Type: Guideline Type: Guideline Type: Ingredient: Guideline Type: Ingredient: Guideline Type: Guideline Type: Guideline Info: Ingredient: Guideline Type: Guideline Type: Guideline Type: Guideline Type: Guideline Type: Guideline Type:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER 3M TWA, as dust CALCIUM HYDROXIDE ACGIH TWA 5 mg/m3 CALCIUM HYDROXIDE OSHA TWA, respirable fraction 5 mg/m3 CALCIUM HYDROXIDE			
HANDLING: STORAGE:	Avoid eye contact. Avoid prolonged or repeated skin contact. Not applicable. CONTROLS, PERSONAL PROTECTION - EXPOSURE 10 mg/m3 PERSULFATE COMPOUNDS ACGIH TWA, as persulfate 0.1 mg/m3 OSHA TWA, as total dust 15 mg/m3 SILANIZED GLASS POWDER 3M TWA, as dust CALCIUM HYDROXIDE ACGIH TWA 5 mg/m3 CALCIUM HYDROXIDE OSHA TWA, respirable fraction 5 mg/m3			

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Odor, Color, Grade:	Odorless powders of different colors.
General Physical Form:	Solid
Autoignition temperature:	Not Applicable
Flash Point:	Not Applicable
Flammable Limits - LEL:	No Data Available
Flammable Limits - UEL:	No Data Available
BOILING POINT:	Not Applicable
DENSITY:	> 1 g/ml
VAPOR DENSITY:	Not Applicable
VAPOR PRESSURE:	Not Applicable
SPECIFIC GRAVITY:	No Data Available
pH:	Not Applicable
MELTING POINT:	No Data Available
EVAPORATION RATE:	Not Applicable
VISCOSITY:	Not Applicable
SOLUBILITY IN WATER:	Negligible
Specific Physical Form:	Powder
Kow - Oct/Water partition coef:	No Data Available

SECTION 10 - STABILITY and REACTIVITY

STABILITY:	Stable.
CONDITIONS TO AVOID:	10.1 Conditions to avoid None known 10.2 Materials to avoid None known
HAZARDOUS POLYMERIZATION:	Hazardous polymerization will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Substance: None known. (Condition: During Combustion)

SECTION 11 - TOXICOLOGICAL INFORMATION

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

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:	Not determined.
CHEMICAL FATE INFORMATION:	Not determined.
SECTION 13 - DISPOS	AL CONSIDERATIONS

WASTE DISPOSAL:

Incinerate in an industrial or commercial facility in the presence of a combustible material. For quantities <100 lbs. (50kg): dispose of waste product in a sanitary landfill. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste. Since regulations vary, consult applicable regulations or authorities before disposal.

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information was modified. Section 5; Skin protection phrase was modified. Section 8: Prevention of swallowing information was modified. Section 13: Waste disposal method information was modified. Section 15: 311/312 hazard categories heading was modified. Section 15: International regulations information was modified. Section 15: State regulations information was modified. Section 15: US federal regulations information was modified. Section 4: First aid for skin contact - decontamination - was modified. Section 4: First aid for skin contact - medical assistance - was modified. Section 4: First are ros inhalation - termination of exposure - was modified. Section 10: Hazardous polymerization heading was modified. Section 16: NFPA explanation was modified. Page Heading: Product name was modified. Section 15: 311/312 Delayed Hazard score was modified. Section 15: Inventories information was modified. Section 12: Ecotoxicological information heading was modified. Section 12: Chemical fate information heading was modified. Section 16: NFPA hazard classification for special hazards was modified. Section 12: Ecotoxicological phrase was modified. Section 12: Chemical Fate phrase was modified. Section 3: Immediate inhalation hazard(s) was added. Section 3: Immediate skin hazard(s) was added. Section 4: First aid for skin contact - termination of exposure - was added. Section 4: First aid for skin contact - handling - was added. Section 3: Carcinogenicity phrase was added. Section 3: Immediate other hazard(s) was added. Section 9: Property description for optional properties was added. Section 2: Ingredient phrase was added. Section 14: ID Number(s) Template 1 was added. Section 2: Ingredient table was added. Section 8: Exposure guidelines ingredient information was added. Section 8: Exposure guidelines data source legend was added. Section 3: Carcinogenicity table was added. Section 3: Carcinogenicity heading was added. Section 15: California proposition 65 ingredient information was added. Section 15: California proposition 65 heading was added. Section 15: California proposition 6S cancer warning was added. Section 10.1 Conditions to avoid was added. Section 10.2 Materials to avoid was added. Section 6: Release measures information was added. Section 6: Release measures information was added. Section 6: Release measures information was added, Section 10; Materials to avoid physical property was added. Section 10: Conditions to avoid physical property was added. Section 8: Skin/ hand protection phrase was added. Section 3: Other potential health effects heading was deleted. Section 4: First aid for eye contact - termination of exposure - was deleted. Section 6: Release measures information was deleted. Section 10: Materials and conditions to avoid physical property was deleted. Section 3: Immediate other hazard(s) comment was deleted. Section 3: Other potential health effects was deleted.



Material Safety Data Sheet

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PRODUCT NAME:3MTM ESPETM RelyXTM Unicem 2 Automix Refill**MANUFACTURER:**3M**DIVISION:**3M ESPE Dental Products

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

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

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

Document Group: 28-3754-0

ID Number(s):

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

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

28-1380-6, 28-1333-5

Revision Changes: Kit: Component document group number(s) was modified. Kit initial issue message was modified.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may

MATERIAL SAFETY DATA SHEET 3MTM ESPETM RelyXTM Unicem 2 Automix Refill 09/02/10

have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M.



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:3M™ ESPE™ RelyX™ UNICEM 2 AUTOMIX CATALYST**MANUFACTURER:**3M**DIVISION:**3M ESPE Dental Products

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

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

 Issue Date:
 09/17/13

 Supercedes Date:
 05/16/11

Document Group: 28-1333-5

Product Use:

Intended Use:Dental ProductLimitations on Use:For use only by dental professionals.Specific Use:Dental cement

SECTION 2: INGREDIENTS

Ingredient

SILANE TREATED GLASS POWDER SUBSTITUTED DIMETHACRYLATE 1-BENZYL-5-PHENYL-BARBIC-ACID, CALCIUM SALT SILANE TREATED SILICA SODIUM P-TOLUENESULFINATE 1,12-DODECANE DIMETHYCRYLATE CALCIUM HYDROXIDE METHACRYLATED ALIPHATIC AMINE METHACRYLATED ALIPHATIC AMINE TITANIUM DIOXIDE

C.A.S. No. % by Wt None 55 - 65 20 - 30 27689-12-9 None < 5 68909-20-6 < 5 824-79-3 < 5 72829-09-5 < 5 1305-62-0 < 2 93962-70-0 < 1.0 93962-71-1 < 1.013463-67-7 < 0.5

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

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

General Physical Form: Solid

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

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

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

Skin Contact:

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

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

Inhalation:

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

Ingestion:

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

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

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

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

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

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

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

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature Flash Point Flammable Limits(LEL) Flammable Limits(UEL) No Data Available No flash point No Data Available No Data Available

5.2 EXTINGUISHING MEDIA

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

5.3 PROTECTION OF FIRE FIGHTERS

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

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

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

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

Clean-up methods

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

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

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid skin contact. Wash hands after handling and before eating. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Avoid eye contact with dust or airborne particles.

7.2 STORAGE

Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

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

8.2.2 Skin Protection

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

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8.2.3 Respiratory Protection

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

8.2.4 Prevention of Swallowing

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

8.3 EXPOSURE GUIDELINES

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

SOURCE OF EXPOSURE LIMIT DATA: ACGIH: American Conference of Governmental Industrial Hygienists CMRG: Chemical Manufacturer Recommended Guideline OSHA: Occupational Safety and Health Administration AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form: Paste Odor, Color, Grade: tooth-colored pastes with slight acrylic odor **General Physical Form:** Solid Autoignition temperature No Data Available **Flash Point** No flash point Flammable Limits(LEL) No Data Available No Data Available Flammable Limits(UEL) **Boiling Point** No Data Available Density 2 - 2.2 g/cm3 Vapor Density No Data Available No Data Available Vapor Pressure **Specific Gravity** 2 - 2.2 [Ref Std: WATER=1] Not Applicable pН Melting point No Data Available Nil Solubility in Water **Evaporation rate** No Data Available Kow - Oct/Water partition coef No Data Available **Percent volatile** No Data Available Viscosity No Data Available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: 10.1 Conditions to avoid Heat

10.2 Materials to avoid None known

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

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

SECTION 11: TOXICOLOGICAL INFORMATION

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

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

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

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14:TRANSPORT INFORMATION

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

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

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

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

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

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

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

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

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

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

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

Revision Changes:

Section 1: Product use information information was modified.

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

Section 9: Density information information was modified.

Section 9: Vapor density value information was modified.

Section 9: Vapor pressure value information was modified.

Section 9: Boiling point information information was modified.

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

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

Section 5: Autoignition temperature information information was modified.

Section 5: Flash point information information was modified.

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

Section 9: Specific gravity information information was modified.

Section 9: pH information information was modified.

Section 9: Melting point information information was modified.

Section 9: Solubility in water text information was modified.

Section 9: Flash point information information was modified.

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

Section 9: Flammable limits (UEL) information information was modified. Section 9: Autoignition temperature information information was modified. Section 2: Ingredient table information was modified. Section 8: Exposure guidelines ingredient information information was modified. Copyright information was modified.

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Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:3MTM ESPETM RelyXTM UNICEM 2 AUTOMIX Base Paste**MANUFACTURER:**3M**DIVISION:**3M ESPE Dental Products

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

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

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

Document Group: 28-1380-6

Product Use:

Intended Use:Dental ProductLimitations on Use:For use only by dental professionals.Specific Use:Dental cement

SECTION 2: INGREDIENTS

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

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

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

General Physical Form: Solid

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

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

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

Skin Contact:

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

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

Inhalation:

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

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

Ingestion:

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

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

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

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

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

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

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

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature	No Data Available
Flash Point	No flash point
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available

5.2 EXTINGUISHING MEDIA

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

5.3 PROTECTION OF FIRE FIGHTERS

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

Unusual Fire and Explosion Hazards: Not applicable.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air.

6.2. Environmental precautions

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

Clean-up methods

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

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

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Wash hands after handling and before eating. Wash contaminated clothing thoroughly before re-use. Discard contaminated leather clothing. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Do not get in eyes, on skin or on clothing.

7.2 STORAGE

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

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

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

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

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

8.2.2 Skin Protection

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

8.2.3 Respiratory Protection

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

8.2.4 Prevention of Swallowing

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

8.3 EXPOSURE GUIDELINES

<u>Authority</u>	Type	<u>Limit</u>	Additional Information
Manufacturer	TWA, as dust	10 mg/m3	
determined			
ACGIH	TWA, as persulfate	0.1 mg/m3	
	Manufacturer	Manufacturer TWA, as dust determined	Manufacturer TWA, as dust 10 mg/m3 determined

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists CMRG: Chemical Manufacturer Recommended Guideline OSHA: Occupational Safety and Health Administration AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form: Odor, Color, Grade: General Physical Form: Autoignition temperature Flash Point Flammable Limits(LEL) Flammable Limits(UEL) Boiling Point Density Vapor Density

Vapor Pressure

Specific Gravity pH Melting point

Solubility in Water Evaporation rate Kow - Oct/Water partition coef Percent volatile Viscosity Paste toothcolored paste with slight acrylic odor Solid *No Data Available* No flash point *No Data Available No Data Available No Data Available* 2 - 2.2 g/cm3 *No Data Available*

No Data Available

2 - 2.2 [*Ref Std:* WATER=1] *Not Applicable No Data Available*

Negligible No Data Available No Data Available No Data Available No Data Available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: 10.1 Conditions to avoid Heat

10.2 Materials to avoid None known

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

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

SECTION 11: TOXICOLOGICAL INFORMATION

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

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

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

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14:TRANSPORT INFORMATION

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

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

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

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

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

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

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

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

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

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

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

Revision Changes:

- Section 3: Potential effects from skin contact information was modified.
- Section 3: Potential effects from inhalation information was modified.
- Section 7: Handling information was modified.
- Section 8: Engineering controls information was modified.
- Section 4: First aid for skin contact medical assistance was modified.
- Section 4: First aid for ingestion (swallowing) medical assistance was modified.
- Section 9: Property description for optional properties was modified.
- Section 2: Ingredient table was modified.
- Section 6: Personal precautions information was modified.

Copyright was modified.

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Document Group:	17-9608-5	Version Number:	6.00
Issue Date:	03/03/15	Supercedes Date:	02/20/13

SECTION 1: Identification

1.1. Product identifier

 $3M^{{\scriptscriptstyle\rm TM}}\,ESPE^{{\scriptscriptstyle\rm TM}}\,RELYX^{{\scriptscriptstyle\rm TM}}\,UNICEM^{{\scriptscriptstyle\rm TM}}\,APLICAP/MAXICAP\,LIQUID$

Product Identification Numbers LE-FSF6-5681-0, LE-FSFD-5682-1

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, For use by dental professionals.

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

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

2.1. Hazard classification

Flammable Liquid: Category 4. Serious Eye Damage/Irritation: Category 1. Skin Sensitizer: Category 1.

2.2. Label elements Signal word Danger

Symbols Corrosion | Exclamation mark |

3MTM ESPETM RELYXTM UNICEMTM APLICAP/MAXICAP LIQUID 03/03/15



Hazard Statements Combustible liquid.

Causes serious eye damage. May cause an allergic skin reaction.

Precautionary Statements

Prevention:

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear protective gloves and eye/face protection. Contaminated work clothing must not be allowed out of the workplace.

Response:

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

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

Immediately call a POISON CENTER or doctor/physician.

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

Wash contaminated clothing before reuse.

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

Storage:

Store in a well-ventilated place. Keep cool.

Disposal:

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

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

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

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

SECTION 4: First aid measures

3MTM ESPETM RELYXTM UNICEMTM APLICAP/MAXICAP LIQUID 03/03/15

4.1. Description of first aid measures

Inhalation:

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

Skin Contact:

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

Eye Contact:

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

If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion

5.3. Special protective actions for fire-fighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Contain spill. Collect as much of the spilled material as possible using non-sparking tools. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

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

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

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

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

Skin/hand protection

See Section 7.1 for additional information on skin protection.

Respiratory protection

None required.

SECTION 9: Physical and chemical properties

0.1. Information on basic physical and chemical properties				
General Physical Form:	Liquid			
Specific Physical Form:	Liquid			
Odor, Color, Grade:	Clear yellow liquid with acrylate odor.			
Odor threshold	No Data Available			
рН	2.3			
Melting point	No Data Available			
Boiling Point	> 200 °F			
Flash Point	64 °C [<i>Test Method:</i> Tagliabue Closed Cup]			
Evaporation rate	No Data Available			
Flammability (solid, gas)	Not Applicable			
Flammable Limits(LEL)	No Data Available			
Flammable Limits(UEL)	No Data Available			
Vapor Pressure	No Data Available			
Vapor Density	No Data Available			
Density	1.14 g/ml			
Specific Gravity	1.14 [<i>Ref Std:</i> WATER=1]			
Solubility In Water	< 63 g/l			
Solubility- non-water	No Data Available			
Partition coefficient: n-octanol/ water	No Data Available			
Autoignition temperature	No Data Available			
Decomposition temperature	No Data Available			
Viscosity	No Data Available			
Percent volatile	No Data Available			

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid Heat

10.5. Incompatible materials None known.

10.6. Hazardous decomposition products

<u>Substance</u>

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

Condition

3MTM ESPETM RELYXTM UNICEMTM APLICAP/MAXICAP LIQUID 03/03/15

reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:

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

Skin Contact:

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

Eye Contact:

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

Ingestion:

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

Toxicological Data

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

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	Ingestion	Rat	LD50 > 2,000 mg/kg
TRIETHYLENE GLYCOL DIMETHACRYLATE	Dermal	Professio nal judgeme nt	LD50 estimated to be > 5,000 mg/kg
TRIETHYLENE GLYCOL DIMETHACRYLATE	Ingestion	Rat	LD50 10,837 mg/kg
SUBSTITUTED DIMETHACRYLATE	Dermal	Professio nal judgeme nt	LD50 not applicable
SUBSTITUTED DIMETHACRYLATE	Ingestion	Rat	LD50 > 17,600 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

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

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Serious Eye Damage/Irritation

Name	Species	Value
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	Rabbit	Corrosive
TRIETHYLENE GLYCOL DIMETHACRYLATE	Professio	Moderate irritant
	nal	
	judgeme	
	nt	
SUBSTITUTED DIMETHACRYLATE	Rabbit	Mild irritant

Skin Sensitization

Name	Species	Value
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	Guinea	Not sensitizing
	pig	
TRIETHYLENE GLYCOL DIMETHACRYLATE	Human	Sensitizing
	and	
	animal	
SUBSTITUTED DIMETHACRYLATE	Guinea	Not 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
mixture of mono-, di- and tri-glycerin-dimethacrylate-ester of phosphoric acid	In Vitro	Not mutagenic
TRIETHYLENE GLYCOL DIMETHACRYLATE	In Vitro	Some positive data exist, but the data are not sufficient for classification
SUBSTITUTED DIMETHACRYLATE	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
TRIETHYLENE GLYCOL DIMETHACRYLATE	Dermal	Mouse	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
TRIETHYLENE GLYCOL DIMETHACRYLATE	Dermal	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 833 mg/kg/day	78 weeks
TRIETHYLENE GLYCOL DIMETHACRYLATE	Dermal	blood	All data are negative	Mouse	NOAEL 833 mg/kg/day	78 weeks

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Aspiration Hazard

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

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

SECTION 12: Ecological information

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

13.1. Disposal methods

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

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

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

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

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

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

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

Ingredient	C.A.S. No.	Classification	
Toluene	108-88-3	Female reproductive toxin	
Toluene	108-88-3	Developmental Toxin	

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

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15.3. Chemical Inventories

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

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

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

SECTION 16: Other information

NFPA Hazard Classification

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

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

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