

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

075037205

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

075037213

**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).**

075034434 075034442 075034459 075034467 075034475 075038575 075038583 075038591 078926472 079396233  
273005849 273006163 273008693



## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ ESPE™ RELYX™ LUTING CEMENT LIQUID 3505L & 3515L  
**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:** 12/21/10  
**Supersedes Date:** 09/24/04

**Document Group:** 05-6730-5

#### Product Use:

Intended Use: Dental Product  
Limitations on Use: For use only by dental professionals  
Specific Use: Dental cement

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
WATER	7732-18-5	30 - 40
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	25948-33-8	30 - 40
2-HYDROXYETHYL METHACRYLATE (HEMA)	868-77-9	25 - 35
ETHYL ACETATE	141-78-6	< 2

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Specific Physical Form:** Liquid

**Odor, Color, Grade:** Slight sweet odor, Clear to slightly yellow

**General Physical Form:** Liquid

**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:**

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**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.

**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

No Data Available  
104 °C [Test Method: Tagliabue Closed Cup]

Flammable Limits(LEL)  
Flammable Limits(UEL)

*Not Applicable*  
*Not Applicable*

## 5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

## 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:** No unusual fire or explosion hazards are anticipated.

**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. 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. Remember, adding an absorbent material does not remove a toxic, corrosivity or flammability hazard.

### 6.2. Environmental precautions

For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Place in a metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Collect the resulting residue containing solution. Dispose of collected material as soon as possible.

### Clean-up methods

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. For large spills, if necessary, get assistance from professional spill clean up team. For small spills, carefully cover the spill with soda ash (sodium carbonate) or sodium bicarbonate. Work from around the perimeter inward. Avoid splashing. Add enough water to ease mixing and stir. Continue stirring and adding water and neutralizing agent until the reaction stops. Let cool before collecting. Or use a commercially available 'Acid spill' clean-up kit. Follow the kit directions exactly, as specified. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible.

**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. Avoid skin contact. 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. Wash hands after handling and before eating.

## 7.2 STORAGE

Store in a cool, dry place.

# SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

## 8.1 ENGINEERING CONTROLS

Not applicable.

## 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. See Section 7.1 for additional information on skin protection.

### 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 ingest. Wash hands after handling and before eating.

## 8.3 EXPOSURE GUIDELINES

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
ETHYL ACETATE	ACGIH	TWA	400 ppm	
ETHYL ACETATE	OSHA	TWA	1400 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:**

Liquid

**Odor, Color, Grade:**

Slight sweet odor, Clear to slightly yellow

**General Physical Form:**

Liquid

**Autoignition temperature**

*No Data Available*

**Flash Point**

104 °C [*Test Method:* Tagliabue Closed Cup]

**Flammable Limits(LEL)**

*Not Applicable*

Flammable Limits(UEL)	Not Applicable
Boiling Point	No Data Available
Density	1.2 g/ml
Vapor Density	No Data Available
Vapor Pressure	<=16 psia [@ 131.0 °F]
Specific Gravity	1.2 [Ref Std: WATER=1]
pH	2.2 - 3.2
Melting point	Not Applicable
Solubility in Water	Complete
Evaporation rate	No Data Available
Volatile Organic Compounds	No Data Available
Kow - Oct/Water partition coef	Not Applicable
Percent volatile	No Data Available
VOC Less H2O & Exempt Solvents	No Data Available
Viscosity	175 - 225 centistoke

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

### Materials and 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 or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	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:** Incinerate in an industrial or commercial facility in the presence of a combustible material. 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

### ID Number(s):

70-2010-2502-3, 70-2010-2674-0, 70-2010-2695-5, 70-2010-2698-9, 70-2010-3120-3

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.

The components of this product are listed on the Canadian Domestic Substances List.

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: 1 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 name was modified.

Section 1: Product use information was modified.

Section 16: NFPA hazard classification for health was modified.

Section 8: Other skin protection comment was modified.

Copyright was modified.

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

Section 3: Potential effects from inhalation information was modified.

Section 3: Potential effects from ingestion information was modified.

Section 5: Unusual fire and explosion hazard information was modified.

Section 7: Handling information was modified.

Section 7: Storage information was modified.

Section 8: Prevention of swallowing information was modified.

Section 8: Eye/face protection information was modified.

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

Section 14: Transportation legal text was modified.

Page Heading: Product name was modified.

Section 15: Inventories information was modified.

Section 9: Vapor pressure value was modified.

Section 9: Boiling point information was modified.

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

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

Sections 3 and 9: Odor, color, grade information was modified.

Section 9: Property description for optional properties was modified.

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

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

Section 3: Immediate other hazard(s) was added.

Section 9: Density information was added.



Section 14: ID Number Heading Template 1 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 6: 6.2. Environmental precautions heading was added.  
Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was added.  
Section 10.1 Conditions to avoid heading was added.  
Section 10.2 Materials to avoid heading was added.  
Section 6: Personal precautions information was added.  
Section 6: Environmental procedures information was added.  
Section 6: Methods for cleaning up information was added.  
Section 10: Materials to avoid physical property was added.  
Section 10: Conditions to avoid physical property was added.  
Section 6: Clean-up methods heading was added.  
Section 6: Release measures information was deleted.  
Section 6: Release measures heading was deleted.  
Section 10: Materials and conditions to avoid physical property was deleted.

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<b>Issue Date:</b>	10/20/14	<b>Supersedes Date:</b>	04/26/11

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RELYX™ LUTING PLUS CEMENT PASTE A

#### Product Identification Numbers

LE-F100-0969-1

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

##### Recommended use

Dental Product, Luting cement

##### Restrictions on use

For use only by dental professionals

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	3M ESPE Dental Products
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

#### 2.1. Hazard classification

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

**Pictograms****Hazard Statements**

May cause an allergic skin reaction.

**Precautionary Statements****Prevention:**

Wear protective gloves.

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

**Response:**

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

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

Wash contaminated clothing before reuse.

**Disposal:**

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

**2.3. Hazards not otherwise classified**

None.

## SECTION 3: Composition/information on ingredients

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>% by Wt</b>
SILANE TREATED FILLER	None	70 - 80 Trade Secret *
WATER	7732-18-5	10 - 20 Trade Secret *
2-HYDROXYETHYL METHACRYLATE (HEMA)	868-77-9	5 - 10 Trade Secret *
SILANE TREATED SILICA	68909-20-6	1 - 5 Trade Secret *
4-(DIMETHYLAMINO)-BENZENEETHANOL	50438-75-0	< 1 Trade Secret *
TITANIUM DIOXIDE	13463-67-7	< 1 Trade Secret *

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

## SECTION 4: First aid measures

**4.1. Description of first aid measures****Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**If Swallowed:**

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

## SECTION 5: Fire-fighting measures

**5.1. Suitable extinguishing media**

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

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

None inherent in this product.

**Hazardous Decomposition or By-Products**

**Substance**

Carbon monoxide

Carbon dioxide

**Condition**

During Combustion

During Combustion

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

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

Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

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. 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
TITANIUM DIOXIDE	13463-67-7	ACGIH	TWA:10 mg/m <sup>3</sup>	A4: Not class. as human carcin
TITANIUM DIOXIDE	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m <sup>3</sup>	
TITANIUM DIOXIDE	13463-67-7	OSHA	TWA(as total dust):15 mg/m <sup>3</sup>	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Safety Glasses with side shields

#### Skin/hand protection

See Section 7.1 for additional information on skin protection.

#### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	Off-white to slight yellow, characteristic odor
Odor threshold	No Data Available
pH	No Data Available
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	1.5 g/cm <sup>3</sup>

Specific Gravity	1.5 [Ref Std: 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
Volatile Organic Compounds	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

**Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**Ingestion:**

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

**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.

<b><u>Ingredient</u></b>	<b><u>C.A.S. No.</u></b>	<b><u>Class Description</u></b>	<b><u>Regulation</u></b>
TITANIUM DIOXIDE	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

**Toxicological Data**

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

**Acute Toxicity**

<b><u>Name</u></b>	<b><u>Route</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Rat	LD50 5,564 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
TITANIUM DIOXIDE	Dermal	Rabbit	LD50 > 10,000 mg/kg
TITANIUM DIOXIDE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
TITANIUM DIOXIDE	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

<b><u>Name</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Minimal irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
TITANIUM DIOXIDE	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

<b><u>Name</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Moderate irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
TITANIUM DIOXIDE	Rabbit	No significant irritation

**Skin Sensitization**

<b><u>Name</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
2-HYDROXYETHYL METHACRYLATE (HEMA)	Human and animal	Sensitizing
SILANE TREATED SILICA	Human and animal	Not sensitizing

TITANIUM DIOXIDE	Human and animal	Not sensitizing
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**Respiratory Sensitization**

Name	Species	Value
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**Germ Cell Mutagenicity**

Name	Route	Value
2-HYDROXYETHYL METHACRYLATE (HEMA)	In vivo	Not mutagenic
2-HYDROXYETHYL METHACRYLATE (HEMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
SILANE TREATED SILICA	In Vitro	Not mutagenic
TITANIUM DIOXIDE	In Vitro	Not mutagenic
TITANIUM DIOXIDE	In vivo	Not mutagenic

**Carcinogenicity**

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

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
SILANE TREATED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
TITANIUM DIOXIDE	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
TITANIUM DIOXIDE	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure



**Aspiration Hazard**

Name	Value
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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.

**15.3. Chemical Inventories**

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

Contact 3M for more information.

**15.4. International Regulations**

Contact 3M for more information.

**This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.****SECTION 16: Other information****NFPA Hazard Classification****Health: 2 Flammability: 1 Instability: 0 Special Hazards: None**

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

**Document Group:** 29-6234-8  
**Issue Date:** 10/20/14**Version Number:** 2.00  
**Supersedes Date:** 04/26/11

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**Document Group:** 29-6280-1  
**Issue Date:** 04/22/19

**Version Number:** 3.02  
**Supersedes Date:** 12/29/17

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RELYX™ LUTING PLUS CEMENT PASTE B

#### Product Identification Numbers

LE-F100-0969-8

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

##### Recommended use

Dental Product, Luting cement

##### Restrictions on use

For use only by dental professionals

#### 1.3. Supplier's details

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

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

#### 2.1. Hazard classification

Oxidizing Solid: Category 3.

Serious Eye Damage/Irritation: Category 2A.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Warning

**Symbols**

Flame over circle | Exclamation mark |

**Pictograms****Hazard Statements**

May intensify fire; oxidizer.

Causes serious eye irritation.

May cause an allergic skin reaction.

**Precautionary Statements****Prevention:**

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

Keep away from clothing and other combustible materials.

Take any precaution to avoid mixing with combustibles.

Wear protective gloves and eye/face protection.

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.

In case of fire: Use a water extinguisher to extinguish.

**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
SILANE TREATED CERAMIC	444758-98-9	30 - 40 Trade Secret *
2-HYDROXYETHYL METHACRYLATE (HEMA)	868-77-9	10 - 30 Trade Secret *
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	25948-33-8	10 - 30 Trade Secret *
WATER	7732-18-5	5 - 15 Trade Secret *
GLYCEROL 1,3 DIMETHACRYLATE	1830-78-0	1 - 5 Trade Secret *
POTASSIUM DIPHOSPHATE	7778-77-0	1 - 5 Trade Secret *
POTASSIUM PERSULFATE	7727-21-1	1 - 5 Trade Secret *
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	128-37-0	< 0.5 Trade Secret *
ETHYLENE DIMETHACRYLATE (EGDMA)	97-90-5	< 0.5 Trade Secret *

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

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**If Swallowed:**

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Suitable extinguishing media

In case of fire: Use a water extinguisher to extinguish.

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

None inherent in this product.

### Hazardous Decomposition or By-Products

**Substance**

Carbon monoxide  
Carbon dioxide

**Condition**

During Combustion  
During Combustion

### 5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

## SECTION 6: Accidental release measures

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

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

### 6.2. Environmental precautions

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Collect as much of the spilled material as possible using non-sparking tools. 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. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Take any precaution to avoid mixing with combustibles. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not get in eyes.

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

Store away from heat. Keep/store away from clothing and other combustible materials.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational exposure limits**

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

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional Comments</b>
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	128-37-0	ACGIH	TWA(inhalable fraction and vapor):2 mg/m3	A4: Not class. as human carcin
PERSULFATE COMPOUNDS	7727-21-1	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:	Clear to slight yellow color, characteristic odor.
Odor threshold	No Data Available
pH	No Data Available
Melting point	Not Applicable
Boiling Point	Not Applicable
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	1.5 g/cm <sup>3</sup>
Specific Gravity	1.5 [Ref Std: 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
Volatile Organic Compounds	Not Applicable

## 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

<u>Substance</u>	<u>Condition</u>
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None known.	
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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:

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
SILANE TREATED CERAMIC	Dermal		LD50 estimated to be > 5,000 mg/kg
SILANE TREATED CERAMIC	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	Rat	LD50 > 5,000 mg/kg
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Rat	LD50 5,564 mg/kg
GLYCEROL 1,3 DIMETHACRYLATE	Ingestion	Rat	LD50 > 2,000 mg/kg
POTASSIUM DIPHOSPHATE	Dermal	Rabbit	LD50 > 4,640 mg/kg
POTASSIUM DIPHOSPHATE	Ingestion	Rat	LD50 > 4,640 mg/kg
POTASSIUM PERSULFATE	Dermal	Rabbit	LD50 > 10,000 mg/kg
POTASSIUM PERSULFATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 10.7 mg/l
POTASSIUM PERSULFATE	Ingestion	Rat	LD50 1,130 mg/kg



ETHYLENE DIMETHACRYLATE (EGDMA)	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
ETHYLENE DIMETHACRYLATE (EGDMA)	Ingestion	Rat	LD50 3,300 mg/kg
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Dermal	Rat	LD50 > 2,000 mg/kg
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Rat	LD50 > 2,930 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
SILANE TREATED CERAMIC	similar compounds	No significant irritation
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Minimal irritation
GLYCEROL 1,3 DIMETHACRYLATE	Rabbit	No significant irritation
ETHYLENE DIMETHACRYLATE (EGDMA)	Professional judgement	Mild irritant
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Human and animal	Minimal irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
SILANE TREATED CERAMIC	similar compounds	Mild irritant
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Moderate irritant
GLYCEROL 1,3 DIMETHACRYLATE	In vitro data	Severe irritant
ETHYLENE DIMETHACRYLATE (EGDMA)	Not available	Moderate irritant
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Rabbit	Mild irritant

#### Skin Sensitization

Name	Species	Value
SILANE TREATED CERAMIC	similar compounds	Not classified
2-HYDROXYETHYL METHACRYLATE (HEMA)	Human and animal	Sensitizing
GLYCEROL 1,3 DIMETHACRYLATE	Mouse	Not classified
ETHYLENE DIMETHACRYLATE (EGDMA)	Guinea pig	Sensitizing
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Human	Not classified

#### Respiratory Sensitization

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

#### Germ Cell Mutagenicity

Name	Route	Value
2-HYDROXYETHYL METHACRYLATE (HEMA)	In vivo	Not mutagenic
2-HYDROXYETHYL METHACRYLATE (HEMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
ETHYLENE DIMETHACRYLATE (EGDMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	In Vitro	Not mutagenic

2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	In vivo	Not mutagenic
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**Carcinogenicity**

Name	Route	Species	Value
SILANE TREATED CERAMIC	Inhalation	similar compounds	Some positive data exist, but the data are not sufficient for classification
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	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
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	nervous system	Not classified	Rat	NOAEL 5,000 mg/kg	
ETHYLENE DIMETHACRYLATE (EGDMA)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
SILANE TREATED CERAMIC	Inhalation	pulmonary fibrosis	Not classified	similar compounds	NOAEL Not available	
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	endocrine system   hematopoietic system   liver	Not classified	Rat	NOAEL 200 mg/kg/day	28 days
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	heart   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory system   vascular system	Not classified	Rat	NOAEL 2,000 mg/kg/day	28 days
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	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 (BHT)	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	blood	Not classified	Rat	LOAEL 420 mg/kg/day	40 days
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	endocrine system	Not classified	Rat	NOAEL 25 mg/kg/day	2 generation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	heart	Not classified	Mouse	NOAEL 3,480 mg/kg/day	10 weeks

**Aspiration Hazard**

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

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

**SECTION 12: Ecological information****Ecotoxicological information**

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

**Chemical fate information**

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

**SECTION 13: Disposal considerations****13.1. Disposal methods**

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

**EPA Hazardous Waste Number (RCRA):** Not regulated

**SECTION 14: Transport Information**

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

**SECTION 15: Regulatory information****15.1. US Federal Regulations**

Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:****Physical Hazards**

Oxidizer (liquid, solid or gas)

**Health Hazards**

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

## 15.2. State Regulations

Contact 3M for more information.

## 15.3. Chemical Inventories

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

Contact 3M for more information.

## 15.4. International Regulations

Contact 3M for more information.

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

## SECTION 16: Other information

### NFPA Hazard Classification

**Health:** 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

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

**Document Group:** 29-6280-1  
**Issue Date:** 04/22/19

**Version Number:** 3.02  
**Supersedes Date:** 12/29/17

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<b>Issue Date:</b>	01/17/18	<b>Supersedes Date:</b>	02/25/16

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RELYX™ LUTING CEMENT LIQUID 3505L & 3515L

#### Product Identification Numbers

70-2010-2502-3, 70-2010-2674-0, 70-2010-2698-9, 70-2010-3120-3

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

##### Recommended use

Dental Product, Cement

##### Restrictions on use

For use only by dental professionals

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Oral Care Solutions Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

#### 2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Warning

**Symbols**

Exclamation mark |

**Pictograms****Hazard Statements**

Causes eye irritation.

May cause an allergic skin reaction.

**Precautionary Statements****Prevention:**

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**

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>% by Wt</b>
WATER	7732-18-5	30 - 40 Trade Secret *
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	25948-33-8	30 - 40 Trade Secret *
2-HYDROXYETHYL METHACRYLATE (HEMA)	868-77-9	25 - 35 Trade Secret *
ETHYL ACETATE	141-78-6	< 2 Trade Secret *

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

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**If Swallowed:**

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

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

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

None inherent in this product.

**Hazardous Decomposition or By-Products****Substance**

Carbon monoxide

Carbon dioxide

**Condition**

During Combustion

During Combustion

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. 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

No special storage requirements.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
ETHYL ACETATE	141-78-6	OSHA	TWA:1400 mg/m3(400 ppm)	
ETHYL ACETATE	141-78-6	ACGIH	TWA:400 ppm	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Use in a well-ventilated area.

#### 8.2.2. Personal protective equipment (PPE)

##### Eye/face protection

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

Safety Glasses with side shields

##### Skin/hand protection

See Section 7.1 for additional information on skin protection.

##### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form:	Liquid
Specific Physical Form:	Liquid
Odor, Color, Grade:	Slight sweet odor, Clear to slightly yellow
Odor threshold	No Data Available
pH	2.2 - 3.2
Melting point	Not Applicable
Boiling Point	No Data Available
Flash Point	104 °C [Test Method: Tagliabue Closed Cup]
Evaporation rate	No Data Available



Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	<=16 psia [ @ 131.0 °F]
Vapor Density	<i>No Data Available</i>
Density	1.2 g/ml
Specific Gravity	1.2 [Ref Std:WATER=1]
Solubility in Water	Complete
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>Not Applicable</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	175 - 225 centistoke
Molecular weight	<i>No Data Available</i>
Volatile Organic Compounds	<i>No Data Available</i>
Percent volatile	<i>No Data Available</i>
VOC Less H2O & Exempt Solvents	<i>No Data Available</i>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

#### Substance

#### Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

##### Inhalation:

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

##### Skin Contact:

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

##### Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy 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
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	Rat	LD50 > 5,000 mg/kg
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Dermal	similar health hazards	LD50 estimated to be > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Rat	LD50 5,564 mg/kg
ETHYL ACETATE	Dermal	Rabbit	LD50 > 18,000 mg/kg
ETHYL ACETATE	Inhalation-Vapor (4 hours)	Rat	LC50 70.5 mg/l
ETHYL ACETATE	Ingestion	Rat	LD50 5,620 mg/kg

ATE = acute toxicity estimate

##### Skin Corrosion/Irritation

Name	Species	Value
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Minimal irritation
ETHYL ACETATE	Rabbit	Minimal irritation

##### Serious Eye Damage/Irritation

Name	Species	Value
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Moderate irritant
ETHYL ACETATE	Rabbit	Mild irritant

##### Skin Sensitization

Name	Species	Value
2-HYDROXYETHYL METHACRYLATE (HEMA)	Human	Sensitizing

	and animal	
ETHYL ACETATE	Guinea pig	Not classified

### Respiratory Sensitization

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

### Germ Cell Mutagenicity

Name	Route	Value
2-HYDROXYETHYL METHACRYLATE (HEMA)	In vivo	Not mutagenic
2-HYDROXYETHYL METHACRYLATE (HEMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
ETHYL ACETATE	In Vitro	Not mutagenic
ETHYL ACETATE	In vivo	Not mutagenic

### Carcinogenicity

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

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	nervous system	Not classified	Rat	NOAEL 5,000 mg/kg	
ETHYL ACETATE	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
ETHYL ACETATE	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
ETHYL ACETATE	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	endocrine system   hematopoietic system   liver	Not classified	Rat	NOAEL 200 mg/kg/day	28 days
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	heart   bone, teeth, nails, and/or hair   immune system   muscles   nervous system   eyes   kidney and/or bladder   respiratory	Not classified	Rat	NOAEL 2,000 mg/kg/day	28 days

		system   vascular system				
ETHYL ACETATE	Inhalation	endocrine system   liver   nervous system	Not classified	Rat	NOAEL 0.043 mg/l	90 days
ETHYL ACETATE	Inhalation	hematopoietic system	Not classified	Rabbit	LOAEL 16 mg/l	40 days
ETHYL ACETATE	Ingestion	hematopoietic system   liver   kidney and/or bladder	Not classified	Rat	NOAEL 3,600 mg/kg/day	90 days

**Aspiration Hazard**

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

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

**SECTION 12: Ecological information****Ecotoxicological information**

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

**Chemical fate information**

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

**SECTION 13: Disposal considerations****13.1. Disposal methods**

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

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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

**EPA Hazardous Waste Number (RCRA):** 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**

Serious eye damage or eye irritation

#### 15.2. State Regulations

Contact 3M for more information.

#### 15.3. Chemical Inventories

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

Contact 3M for more information.

#### 15.4. International Regulations

Contact 3M for more information.

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

## SECTION 16: Other information

#### NFPA Hazard Classification

**Health:** 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

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

<b>Document Group:</b>	05-6730-5	<b>Version Number:</b>	26.01
<b>Issue Date:</b>	01/17/18	<b>Supersedes Date:</b>	02/25/16

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## Safety Data Sheet

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<b>Document Group:</b>	05-6732-1	<b>Version Number:</b>	20.00
<b>Issue Date:</b>	02/25/16	<b>Supersedes Date:</b>	12/10/14

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RELYX™ LUTING CEMENT POWDER 3505P & 3515P

#### Product Identification Numbers

70-2010-1754-1, 70-2010-2503-1, 70-2010-2699-7, 70-2010-3121-1

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

##### Recommended use

Dental Product, Luting cement powder

##### Restrictions on use

For use only by dental professionals

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Oral Care Solutions Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

#### 2.1. Hazard classification

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Danger

##### Symbols

Health Hazard |

#### Pictograms



#### Hazard Statements

May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.

#### Precautionary Statements

##### Prevention:

Avoid breathing dust/fume/gas/mist/vapors/spray.  
In case of inadequate ventilation wear respiratory protection.  
Wear protective gloves.  
Contaminated work clothing must not be allowed out of the workplace.

##### Response:

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.  
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/attention.  
Wash contaminated clothing before reuse.

##### Disposal:

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

#### 2.3. Hazards not otherwise classified

None.

### SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
SILANE TREATED GLASS	None	90 - 99 Trade Secret *
POTASSIUM PERSULFATE	7727-21-1	<= 0.3 Trade Secret *

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### Inhalation:

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

##### Skin Contact:

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

##### Eye Contact:

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

**If Swallowed:**

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

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

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

None inherent in this product.

**Hazardous Decomposition or By-Products****Substance**

Carbon monoxide

Carbon dioxide

**Condition**

During Combustion

During Combustion

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

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. Wash contaminated clothing before reuse. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

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

No special storage requirements.



## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
PERSULFATE COMPOUNDS	7727-21-1	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:	Coarse Powder
Odor, Color, Grade:	Slight characteristic odor, White
Odor threshold	No Data Available
pH	Not Applicable
Melting point	No Data Available
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	Not Applicable
Vapor Density	Not Applicable
Density	2.8 g/cm3

Specific Gravity	2.8 [Ref Std: WATER=1]
Solubility In Water	Not Applicable
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	Not Applicable
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	Not Applicable
Molecular weight	No Data Available
Volatile Organic Compounds	Not Applicable
Percent volatile	Not Applicable
VOC Less H2O & Exempt Solvents	Not Applicable

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

#### Substance

None known.

#### Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

**Inhalation:**

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.

**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.

**Eye Contact:**

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

**Ingestion:**

May be harmful if swallowed.

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

**Toxicological Data**

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

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
SILANE TREATED GLASS	Dermal		LD50 estimated to be > 5,000 mg/kg
SILANE TREATED GLASS	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
POTASSIUM PERSULFATE	Dermal	Rabbit	LD50 > 10,000 mg/kg
POTASSIUM PERSULFATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 10.7 mg/l
POTASSIUM PERSULFATE	Ingestion	Rat	LD50 1,130 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
SILANE TREATED GLASS	Professional judgement	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
SILANE TREATED GLASS	Professional judgement	No significant irritation

**Skin Sensitization**

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

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

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

**Carcinogenicity**

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

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

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

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

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

**Specific Target Organ Toxicity - repeated exposure**

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

**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. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

**EPA Hazardous Waste Number (RCRA):** 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.

### 15.3. Chemical Inventories

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

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

Contact 3M for more information.

### 15.4. International Regulations

Contact 3M for more information.

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

## SECTION 16: Other information

### NFPA Hazard Classification

**Health:** 2 **Flammability:** 1 **Instability:** 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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<b>Issue Date:</b>	02/25/16	<b>Supersedes Date:</b>	12/10/14

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<b>Document Group:</b>	31-4625-5	<b>Version Number:</b>	3.00
<b>Issue Date:</b>	06/20/16	<b>Supersedes Date:</b>	10/20/14

### Product identifier

3525/3525TK 3M™ ESPE™ RELYX™ LUTING PLUS (CLICKER)

### ID Number(s):

70-2010-8882-3, 70-2010-8883-1

### Recommended use

Dental product, Dental luting cement

### Restrictions on use

For use only by dental professionals

### Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Oral Care Solutions Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

### 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:**

29-6234-8, 29-6280-1

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<b>Document Group:</b>	29-6280-1	<b>Version Number:</b>	3.00
<b>Issue Date:</b>	02/25/16	<b>Supersedes Date:</b>	10/20/14

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RELYX™ LUTING PLUS CEMENT PASTE B

#### Product Identification Numbers

LE-F100-0969-8

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

##### Recommended use

Dental Product, Luting cement

##### Restrictions on use

For use only by dental professionals

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	Oral Care Solutions Division
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

#### 2.1. Hazard classification

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

#### Pictograms



#### Hazard Statements

Causes eye irritation.

May cause an allergic skin reaction.

#### Precautionary Statements

##### Prevention:

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.

#### 2.3. Hazards not otherwise classified

None.

### SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
SILANE TREATED CERAMIC	444758-98-9	30 - 40 Trade Secret *
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	25948-33-8	20 - 30 Trade Secret *
2-HYDROXYETHYL METHACRYLATE (HEMA)	868-77-9	10 - 20 Trade Secret *
WATER	7732-18-5	5 - 15 Trade Secret *
GLYCEROL 1,3 DIMETHACRYLATE	1830-78-0	1 - 5 Trade Secret *
POTASSIUM DIPHOSPHATE	7778-77-0	1 - 5 Trade Secret *
POTASSIUM PERSULFATE	7727-21-1	1 - 5 Trade Secret *
GLYCERYL METHACRYLATE	5919-74-4	< 1 Trade Secret *
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	128-37-0	< 0.5 Trade Secret *

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

**Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**If Swallowed:**

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

**SECTION 5: Fire-fighting measures****5.1. Suitable extinguishing media**

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

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

None inherent in this product.

**Hazardous Decomposition or By-Products****Substance**

Carbon monoxide

Carbon dioxide

**Condition**

During Combustion

During Combustion

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

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 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. 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-CRESOL (BHT)	128-37-0	ACGIH	TWA(inhalable fraction and vapor):2 mg/m3	A4: Not class. as human carcin
PERSULFATE COMPOUNDS	7727-21-1	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

Respiratory protection is not 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:	Clear to slight yellow color, characteristic odor.
Odor threshold	No Data Available
pH	No Data Available

Melting point	<i>Not Applicable</i>
Boiling Point	<i>Not Applicable</i>
Flash Point	No flash point
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	<i>No Data Available</i>
Flammable Limits(UEL)	<i>No Data Available</i>
Vapor Pressure	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Density	1.5 g/cm <sup>3</sup>
Specific Gravity	1.5 [Ref Std: WATER=1]
Solubility in Water	Negligible
Solubility- non-water	<i>No Data Available</i>
Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	<i>No Data Available</i>
Volatile Organic Compounds	<i>Not Applicable</i>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

#### Substance

None known.

#### Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

##### Inhalation:

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

##### Skin Contact:

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

##### Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

##### Ingestion:

May be harmful if swallowed.

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

#### Toxicological Data

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

##### Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE 2,000 - 5,000 mg/kg
SILANE TREATED CERAMIC	Dermal		LD50 estimated to be > 5,000 mg/kg
SILANE TREATED CERAMIC	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	Rat	LD50 > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Rat	LD50 5,564 mg/kg
GLYCEROL 1,3 DIMETHACRYLATE	Ingestion	similar compounds	LD50 300-2000 mg/kg
POTASSIUM DIPHOSPHATE	Dermal	Rabbit	LD50 > 4,640 mg/kg
POTASSIUM DIPHOSPHATE	Ingestion	Rat	LD50 > 4,640 mg/kg
POTASSIUM PERSULFATE	Dermal	Rabbit	LD50 > 10,000 mg/kg
POTASSIUM PERSULFATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 10.7 mg/l
POTASSIUM PERSULFATE	Ingestion	Rat	LD50 1,130 mg/kg
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Dermal	Rat	LD50 > 2,000 mg/kg
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Rat	LD50 > 2,930 mg/kg

ATE = acute toxicity estimate

##### Skin Corrosion/Irritation

Name	Species	Value
SILANE TREATED CERAMIC	similar compounds	No significant irritation

2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Minimal irritation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Human and animal	Minimal irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
SILANE TREATED CERAMIC	similar compounds	Mild irritant
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Moderate irritant
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Rabbit	Mild irritant

**Skin Sensitization**

Name	Species	Value
SILANE TREATED CERAMIC	similar compounds	Some positive data exist, but the data are not sufficient for classification
2-HYDROXYETHYL METHACRYLATE (HEMA)	Human and animal	Sensitizing
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Human	Some positive data exist, but the data are not sufficient for classification

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

Name	Route	Value
2-HYDROXYETHYL METHACRYLATE (HEMA)	In vivo	Not mutagenic
2-HYDROXYETHYL METHACRYLATE (HEMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	In Vitro	Not mutagenic
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
SILANE TREATED CERAMIC	Inhalation	similar compounds	Some positive data exist, but the data are not sufficient for classification
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Multiple animal species	Some positive data exist, but the data are not sufficient for classification

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 500 mg/kg/day	2 generation

2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 100 mg/kg/day	2 generation
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**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
COPOLYMER OF ACRYLIC AND ITACONIC ACIDS	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 5,000 mg/kg	

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
SILANE TREATED CERAMIC	Inhalation	pulmonary fibrosis	Some positive data exist, but the data are not sufficient for classification	similar compounds	NOAEL Not available	
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	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 (BHT)	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 500 mg/kg/day	2 generation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	blood	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 420 mg/kg/day	40 days
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 25 mg/kg/day	2 generation
2,6-DI-TERT-BUTYL-P-CRESOL (BHT)	Ingestion	heart	Some positive data exist, but the data are not sufficient for classification	Mouse	NOAEL 3,480 mg/kg/day	10 weeks

**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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.



EPA Hazardous Waste Number (RCRA): 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.

### 15.3. Chemical Inventories

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

Contact 3M for more information.

### 15.4. International Regulations

Contact 3M for more information.

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

## SECTION 16: Other information

### NFPA Hazard Classification

**Health:** 2 **Flammability:** 1 **Instability:** 0 **Special Hazards:** None

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

<b>Document Group:</b>	29-6280-1	<b>Version Number:</b>	3.00
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<b>Document Group:</b>	29-6234-8	<b>Version Number:</b>	2.00
<b>Issue Date:</b>	10/20/14	<b>Supersedes Date:</b>	04/26/11

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ RELYX™ LUTING PLUS CEMENT PASTE A

#### Product Identification Numbers

LE-F100-0969-1

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

##### Recommended use

Dental Product, Luting cement

##### Restrictions on use

For use only by dental professionals

#### 1.3. Supplier's details

<b>MANUFACTURER:</b>	3M
<b>DIVISION:</b>	3M ESPE Dental Products
<b>ADDRESS:</b>	3M Center, St. Paul, MN 55144-1000, USA
<b>Telephone:</b>	1-888-3M HELPS (1-888-364-3577)

#### 1.4. Emergency telephone number

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

### SECTION 2: Hazard identification

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

#### 2.1. Hazard classification

Skin Sensitizer: Category 1.

#### 2.2. Label elements

##### Signal word

Warning

##### Symbols

Exclamation mark |

**Pictograms****Hazard Statements**

May cause an allergic skin reaction.

**Precautionary Statements****Prevention:**

Wear protective gloves.

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

**Response:**

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

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

Wash contaminated clothing before reuse.

**Disposal:**

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

**2.3. Hazards not otherwise classified**

None.

## SECTION 3: Composition/information on ingredients

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>% by Wt</b>
SILANE TREATED FILLER	None	70 - 80 Trade Secret *
WATER	7732-18-5	10 - 20 Trade Secret *
2-HYDROXYETHYL METHACRYLATE (HEMA)	868-77-9	5 - 10 Trade Secret *
SILANE TREATED SILICA	68909-20-6	1 - 5 Trade Secret *
4-(DIMETHYLAMINO)-BENZENEETHANOL	50438-75-0	< 1 Trade Secret *
TITANIUM DIOXIDE	13463-67-7	< 1 Trade Secret *

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

## SECTION 4: First aid measures

**4.1. Description of first aid measures****Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**If Swallowed:**

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

## SECTION 5: Fire-fighting measures

**5.1. Suitable extinguishing media**

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

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

None inherent in this product.

**Hazardous Decomposition or By-Products**

**Substance**

Carbon monoxide

Carbon dioxide

**Condition**

During Combustion

During Combustion

**5.3. Special protective actions for fire-fighters**

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

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

Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

**6.2. Environmental precautions**

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

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. 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
TITANIUM DIOXIDE	13463-67-7	ACGIH	TWA:10 mg/m <sup>3</sup>	A4: Not class. as human carcin
TITANIUM DIOXIDE	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m <sup>3</sup>	
TITANIUM DIOXIDE	13463-67-7	OSHA	TWA(as total dust):15 mg/m <sup>3</sup>	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

Safety Glasses with side shields

#### Skin/hand protection

See Section 7.1 for additional information on skin protection.

#### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	Off-white to slight yellow, characteristic odor
Odor threshold	No Data Available
pH	No Data Available
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	1.5 g/cm <sup>3</sup>

Specific Gravity	1.5 [Ref Std: 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
Volatile Organic Compounds	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

**Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**Ingestion:**

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

**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.

<b><u>Ingredient</u></b>	<b><u>C.A.S. No.</u></b>	<b><u>Class Description</u></b>	<b><u>Regulation</u></b>
TITANIUM DIOXIDE	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

**Toxicological Data**

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

**Acute Toxicity**

<b><u>Name</u></b>	<b><u>Route</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Rat	LD50 5,564 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
TITANIUM DIOXIDE	Dermal	Rabbit	LD50 > 10,000 mg/kg
TITANIUM DIOXIDE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
TITANIUM DIOXIDE	Ingestion	Rat	LD50 > 10,000 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

<b><u>Name</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Minimal irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
TITANIUM DIOXIDE	Rabbit	No significant irritation

**Serious Eye Damage/Irritation**

<b><u>Name</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
2-HYDROXYETHYL METHACRYLATE (HEMA)	Rabbit	Moderate irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
TITANIUM DIOXIDE	Rabbit	No significant irritation

**Skin Sensitization**

<b><u>Name</u></b>	<b><u>Species</u></b>	<b><u>Value</u></b>
2-HYDROXYETHYL METHACRYLATE (HEMA)	Human and animal	Sensitizing
SILANE TREATED SILICA	Human and animal	Not sensitizing



TITANIUM DIOXIDE	Human and animal	Not sensitizing
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**Respiratory Sensitization**

Name	Species	Value
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**Germ Cell Mutagenicity**

Name	Route	Value
2-HYDROXYETHYL METHACRYLATE (HEMA)	In vivo	Not mutagenic
2-HYDROXYETHYL METHACRYLATE (HEMA)	In Vitro	Some positive data exist, but the data are not sufficient for classification
SILANE TREATED SILICA	In Vitro	Not mutagenic
TITANIUM DIOXIDE	In Vitro	Not mutagenic
TITANIUM DIOXIDE	In vivo	Not mutagenic

**Carcinogenicity**

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

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	49 days
2-HYDROXYETHYL METHACRYLATE (HEMA)	Ingestion	Not toxic to development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
SILANE TREATED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
TITANIUM DIOXIDE	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.010 mg/l	2 years
TITANIUM DIOXIDE	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure

**Aspiration Hazard**

Name	Value
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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.

**15.3. Chemical Inventories**

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

Contact 3M for more information.

**15.4. International Regulations**

Contact 3M for more information.

**This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.****SECTION 16: Other information****NFPA Hazard Classification****Health: 2 Flammability: 1 Instability: 0 Special Hazards: None**

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

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