



## Safety Data Sheet

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ 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>	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

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.

72% of the mixture consists of ingredients of unknown acute oral toxicity.

### SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Silane Treated Glass	None	70 - 80 Trade Secret *
Water	7732-18-5	10 - 20 Trade Secret *
2-Hydroxyethyl Methacrylate (HEMA)	868-77-9	< 10 Trade Secret *
Silane Treated Silica	68909-20-6	< 2 Trade Secret *
4-(Dimethylamino)-Benzeneethanol	50438-75-0	< 1 Trade Secret *
Allylthiourea	109-57-9	< 0.5 Trade Secret *
Titanium Oxide	13463-67-7	< 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**

Allergic skin reaction (redness, swelling, blistering, and itching).

**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**

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

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

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

**6.2. Environmental precautions**

Avoid release to the environment.

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

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

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

A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not get in eyes.

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

Store away from heat.

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

**8.1. Control parameters**

**Occupational exposure limits**

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Titanium Oxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human carcin
Titanium Oxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
SILICA, AMORPHOUS	68909-20-6	OSHA	TWA:20 millions of particles/cu. ft.;TWA concentration:0.8 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists  
 AIIIA : American Industrial Hygiene Association  
 CMRG : Chemical Manufacturer's Recommended Guidelines  
 OSHA : United States Department of Labor - Occupational Safety and Health Administration  
 TWA : Time-Weighted-Average  
 STEL: Short Term Exposure Limit  
 CEIL: Ceiling

**8.2. Exposure controls**

**8.2.1. Engineering controls**

Use in a well-ventilated area.

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

**Eye/face protection**

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

**Skin/hand protection**

See Section 7.1 for additional information on skin protection.

**Respiratory protection**

None required.

**SECTION 9: Physical and chemical properties**

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

**Appearance**

Physical state

Solid

Color

Off-White, Yellow

Specific Physical Form:

Paste

Odor

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)	<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 [ <i>Ref Std: WATER=1</i> ]
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>
Molecular weight	<i>Not Applicable</i>
Volatile Organic Compounds	<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

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.

**Additional Health Effects:**

**Carcinogenicity:**

Exposures needed to cause the following health effect(s) are not expected during normal, intended use:

Contains a chemical or chemicals which can cause cancer.

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

**Toxicological Data**

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

**Acute Toxicity**

Name	Route	Species	Value
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 Oxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Oxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Allylthiourea	Ingestion	Rat	LD50 200 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
2-Hydroxyethyl Methacrylate (HEMA)	Rabbit	Minimal irritation
Silane Treated Silica	Rabbit	No significant irritation
Titanium Oxide	Rabbit	No significant irritation
Allylthiourea	Professional judgement	Minimal irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
2-Hydroxyethyl Methacrylate (HEMA)	Rabbit	Moderate irritant
Silane Treated Silica	Rabbit	No significant irritation
Titanium Oxide	Rabbit	No significant irritation
Allylthiourea	Professional judgement	Mild irritant

### Skin Sensitization

Name	Species	Value
2-Hydroxyethyl Methacrylate (HEMA)	Human and animal	Sensitizing
Silane Treated Silica	Human and animal	Not classified
Titanium Oxide	Human and animal	Not classified
Allylthiourea	Professional judgement	Sensitizing

### 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
Silane Treated Silica	In Vitro	Not mutagenic
Titanium Oxide	In Vitro	Not mutagenic
Titanium Oxide	In vivo	Not mutagenic
Allylthiourea	In Vitro	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 Oxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium Oxide	Inhalation	Rat	Carcinogenic
Allylthiourea	Ingestion	Rat	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	prematuring & 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	prematuring & during

					gestation
Silane Treated Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Silane Treated Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Silane Treated Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

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

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Silane Treated Silica	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
Titanium Oxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium Oxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Allylthiourea	Ingestion	endocrine system	Not classified	Rat	NOAEL 23 mg/kg/day	15 months

#### 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.

## SECTION 14: Transport Information

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



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

Contact 3M for more information.

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

Not applicable

**Health Hazards**

Respiratory or Skin Sensitization

**15.2. State Regulations**

Contact 3M for more information.

**15.3. Chemical Inventories**

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

Contact 3M for more information.

**15.4. International Regulations**

Contact 3M for more information.

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

**SECTION 16: Other information****NFPA Hazard Classification**

**Health:** 2 **Flammability:** 1 **Instability:** 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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