

## SAFETY DATA SHEETS

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

075825575

**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).**

075825500 075825526 075825534 075825542 075825559 075825567 075825583



## Safety Data Sheet

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<b>Issue Date:</b>	02/25/16	<b>Supersedes Date:</b>	03/05/15

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ PROTEMP™ PLUS BASE PASTE

#### Product Identification Numbers

LE-F100-0544-1, LE-F100-0714-9

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

##### Recommended use

Dental Material, Temporary crown and bridge material

##### 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

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### 2.2. Label elements

##### Signal word

Not applicable.

##### Symbols

Not applicable.

**Pictograms**

Not applicable.

**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>
DIMETHACRYLATE (BISEMA6)	41637-38-1	50 - 60 Trade Secret *
SILANE TREATED AMORPHOUS SILICA	None	20 - 30 Trade Secret *
REACTION PRODUCTS OF 1,6-DIISOCYANATOHXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	1101874-33-2	10 - 15 Trade Secret *
SILANE TREATED SILICA	68909-20-6	5 - 10 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:**

Wash with soap and water. 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**

Material will not burn. Non-combustible. Use a fire fighting agent suitable for surrounding fire.

**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  
Irritant Vapors or Gases

**Condition**

During Combustion  
During Combustion  
During Combustion

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

No special protective actions for fire-fighters are anticipated.

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

Ventilate the area with fresh air. Observe precautions from other sections.

**6.2. Environmental precautions**

Avoid release to the environment.

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

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

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

Do not use in a confined area with minimal air exchange. 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 eat, drink or smoke when using this product. Wash thoroughly after handling.

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

Protect from sunlight. Store away from heat.

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

No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

**8.2. Exposure controls****8.2.1. Engineering controls**

Use with appropriate local exhaust ventilation.

**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**

<b>General Physical Form:</b>	Solid Paste
<b>Specific Physical Form:</b>	Paste
<b>Odor, Color, Grade:</b>	tooth colored paste, slight acrylic odor
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>Not Applicable</i>
<b>Melting point</b>	<i>No Data Available</i>
<b>Boiling Point</b>	<i>No Data Available</i>
<b>Flash Point</b>	<i>Not Applicable</i>
<b>Evaporation rate</b>	<i>No Data Available</i>
<b>Flammability (solid, gas)</b>	Not Classified
<b>Flammable Limits(LEL)</b>	<i>Not Applicable</i>
<b>Flammable Limits(UEL)</b>	<i>Not Applicable</i>
<b>Vapor Pressure</b>	<i>No Data Available</i>
<b>Vapor Density</b>	<i>No Data Available</i>
<b>Density</b>	1.3 - 1.4 g/cm <sup>3</sup>
<b>Specific Gravity</b>	1.3 - 1.4 [Ref Std: WATER=1]
<b>Solubility in Water</b>	Negligible
<b>Solubility- non-water</b>	<i>No Data Available</i>
<b>Partition coefficient: n-octanol/ water</b>	<i>No Data Available</i>
<b>Autoignition temperature</b>	<i>No Data Available</i>
<b>Decomposition temperature</b>	<i>No Data Available</i>
<b>Viscosity</b>	<i>No Data Available</i>
<b>Molecular weight</b>	<i>No Data Available</i>
<b>Volatile Organic Compounds</b>	<i>Not Applicable</i>
<b>Percent volatile</b>	<i>Not Applicable</i>
<b>VOC Less H<sub>2</sub>O &amp; Exempt Solvents</b>	<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:

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.

#### Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation. Vapors released during curing may cause 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
DIMETHACRYLATE (BISEMA6)	Dermal	Professional judgment	LD50 estimated to be > 5,000 mg/kg
DIMETHACRYLATE (BISEMA6)	Ingestion	Rat	LD50 > 2,000 mg/kg
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-	Ingestion	Rat	LD50 > 2,000 mg/kg

HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)			
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

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	Rabbit	Minimal irritation
SILANE TREATED SILICA	Rabbit	No significant irritation

### Serious Eye Damage/Irritation

Name	Species	Value
Overall product	Rabbit	Mild irritant
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	In vitro data	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation

### Skin Sensitization

Name	Species	Value
DIMETHACRYLATE (BISEMA6)	Guinea pig	Not sensitizing
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	Mouse	Not sensitizing
SILANE TREATED SILICA	Human and animal	Not 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
DIMETHACRYLATE (BISEMA6)	In Vitro	Not mutagenic
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	In Vitro	Not mutagenic
SILANE TREATED SILICA	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

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
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	1 generation

SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	mg/kg/day NOAEL 1,350 mg/kg/day	during organogenesis
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**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	All data are negative	Human	NOAEL Not available	occupational exposure

**Aspiration Hazard**

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

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

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

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

**Chemical fate information**

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

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

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

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. If no other disposal options are available, waste product 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.

**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:** 1 **Flammability:** 0 **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>	24-8564-7	<b>Version Number:</b>	5.00
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## Material Safety Data Sheet

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### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** 3M™ ESPE™ PROTEMP™ PLUS CATALYST PASTE

**MANUFACTURER:** 3M

**DIVISION:** 3M ESPE Dental Products

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

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

**Issue Date:** 03/18/13

**Supersedes Date:** 08/25/11

**Document Group:** 24-8557-1

#### Product Use:

Intended Use: Dental Material  
Limitations on Use: For use only by dental professionals  
Specific Use: Dental temporary crown and bridge material

### SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
ETHANOL, 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY)]BIS-, DIACETATE	19224-29-4	70 - 80
BENZYL-PHENYL-BARBITURIC ACID	72846-00-5	5 - 15
SILANE TREATED SILICA	68909-20-6	5 - 15
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	13122-18-4	< 0.4

### SECTION 3: HAZARDS IDENTIFICATION

#### 3.1 EMERGENCY OVERVIEW

**Specific Physical Form:** Paste

**Odor, Color, Grade:** white, paste, slight acridic odor

**General Physical Form:** Solid

**Immediate health, physical, and environmental hazards:** No immediate health, physical or environmental hazards are anticipated. May cause allergic skin reaction. May cause target organ effects. This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of

the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

### 3.2 POTENTIAL HEALTH EFFECTS

**Eye Contact:**

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

**Skin Contact:**

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

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

**Inhalation:**

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

**Ingestion:**

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

May be absorbed following ingestion and cause target organ effects.

**Target Organ Effects:**

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

## 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

*No Data Available*

Flash Point

*No flash point*

Flammable Limits(LEL)

*No Data Available*

Flammable Limits(UEL)

*No Data Available*

### 5.2 EXTINGUISHING MEDIA

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

### 5.3 PROTECTION OF FIRE FIGHTERS

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

**Unusual Fire and Explosion Hazards:** Not applicable.

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

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.

### 6.2. Environmental precautions

Collect the resulting residue containing solution. Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

#### Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

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

## SECTION 7: HANDLING AND STORAGE

### 7.1 HANDLING

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

### 7.2 STORAGE

Store away from heat. Store out of direct sunlight.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation.

### 8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### 8.2.1 Eye/Face Protection

Avoid eye contact.

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

.

#### 8.2.2 Skin Protection

Avoid skin contact. Gloves not normally required.

### 8.2.3 Respiratory Protection

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

### 8.2.4 Prevention of Swallowing

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

## 8.3 EXPOSURE GUIDELINES

None Established

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Paste
Odor, Color, Grade:	white, paste, slight acridic odor
General Physical Form:	Solid
Autoignition temperature	No Data Available
Flash Point	No flash point
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Boiling Point	No Data Available
Density	1.2 - 1.3 g/cm3
Vapor Density	No Data Available
Vapor Pressure	No Data Available
Specific Gravity	1.2 - 1.3 [Ref Std: WATER=1]
pH	Not Applicable
Melting point	No Data Available
Solubility in Water	Negligible
Evaporation rate	No Data Available
Kow - Oct/Water partition coef	No Data Available
Viscosity	No Data Available

## SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

### Materials and Conditions to Avoid:

#### 10.1 Conditions to avoid

Heat

#### 10.2 Materials to avoid

None known

**Hazardous Polymerization:** Hazardous polymerization will not occur.

## Hazardous Decomposition or By-Products

### Substance

Carbon monoxide  
Carbon dioxide  
Irritant Vapors or Gases

### Condition

During Combustion  
During Combustion  
During Combustion

## SECTION 11: TOXICOLOGICAL INFORMATION

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

## SECTION 12: ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL INFORMATION

Not determined.

### CHEMICAL FATE INFORMATION

Not determined.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** 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.

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

## SECTION 14: TRANSPORT INFORMATION

LE-F100-0543-9, LE-F100-0714-8

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

## SECTION 15: REGULATORY INFORMATION

### US FEDERAL REGULATIONS

Contact 3M for more information.

### 311/312 Hazard Categories:

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

### STATE REGULATIONS

Contact 3M for more information.

## **CHEMICAL INVENTORIES**

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

Contact 3M for more information.

## **INTERNATIONAL REGULATIONS**

Contact 3M for more information.

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

## **SECTION 16: OTHER INFORMATION**

### **NFPA Hazard Classification**

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

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

### **Revision Changes:**

Section 13: Waste disposal method information was modified.

Section 2: Ingredient table was modified.

Section 6: Personal precautions information was modified.

Section 6: Methods for cleaning up information was modified.

Copyright was modified.

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## Safety Data Sheet

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**Document Group:** 24-8557-1  
**Issue Date:** 02/07/18

**Version Number:** 5.01  
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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ PROTEMP™ PLUS CATALYST PASTE

#### Product Identification Numbers

LE-F100-0543-9, LE-F100-0714-8

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

##### Recommended use

Dental Material, Temporary crown and bridge material

##### 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

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### 2.2. Label elements

##### Signal word

Not applicable.

##### Symbols



Not applicable.

**Pictograms**

Not applicable.

6% of the mixture consists of ingredients of unknown acute oral toxicity.

6% of the mixture consists of ingredients of unknown acute dermal toxicity.

**SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
ETHANOL, 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY)]BIS-, DIACETATE	19224-29-4	70 - 80 Trade Secret *
BENZYL-PHENYL-BARBITURIC ACID	72846-00-5	5 - 15 Trade Secret *
SILANE TREATED SILICA	68909-20-6	5 - 15 Trade Secret *
(1-methylethylidene)bis(4,1-phenyleneoxy-2,1-ethanediyl)(1-phenyleneoxy-2,2'ethoxyethanediyl)bisacetate	None	1 - 10 Trade Secret *
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	13122-18-4	< 0.4 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:**

Wash with soap and water. If you feel unwell, get medical attention.

**Eye Contact:**

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

**If Swallowed:**

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

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

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

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

None inherent in this product.

### Hazardous Decomposition or By-Products

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

Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

### 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
SILICA, AMORPHOUS	68909-20-6	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

#### Skin/hand protection

See Section 7.1 for additional information on skin protection.

#### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

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

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	white, paste, slight acridic odor
Odor threshold	No Data Available
pH	Not Applicable
Melting point	No Data Available
Boiling Point	No Data Available
Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	No Data Available
Flammable Limits(UEL)	No Data Available
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	1.2 - 1.3 g/cm <sup>3</sup>
Specific Gravity	1.2 - 1.3 [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
Molecular weight	No Data Available
Percent volatile	No Data Available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

### 10.4. Conditions to avoid

Heat

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

<u>Substance</u>	<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:

May be harmful in contact with skin.

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

#### Eye Contact:

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

#### Ingestion:

May be harmful if swallowed.

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

### Toxicological Data

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

### Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE2,000 - 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE2,000 - 5,000 mg/kg
ETHANOL, 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY)]BIS-, DIACETATE	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
ETHANOL, 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY)]BIS-, DIACETATE	Ingestion	Rat	LD50 > 2,000 mg/kg
BENZYL-PHENYL-BARBITURIC ACID	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
BENZYL-PHENYL-BARBITURIC ACID	Ingestion	Rat	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	Dermal	Rat	LD50 > 2,000 mg/kg
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.8 mg/l
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	Ingestion	Rat	LD50 12,905 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
ETHANOL, 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY)]BIS-, DIACETATE	In vitro data	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	Rabbit	No significant irritation

### Serious Eye Damage/Irritation

Name	Species	Value
ETHANOL, 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY)]BIS-, DIACETATE	In vitro data	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	Rabbit	No significant irritation

### Skin Sensitization

Name	Species	Value
ETHANOL, 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY)]BIS-, DIACETATE	Mouse	Not classified
BENZYL-PHENYL-BARBITURIC ACID	Mouse	Not classified
SILANE TREATED SILICA	Human and animal	Not classified
TERT-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	Guinea pig	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
------	-------	-------

ETHANOL, 2,2'-[(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY)]BIS-, DIACETATE	In Vitro	Not mutagenic
BENZYL-PHENYL-BARBITURIC ACID	In Vitro	Not mutagenic
SILANE TREATED SILICA	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

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

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

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

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
BENZYL-PHENYL-BARBITURIC ACID	Ingestion	nervous system	Not classified	Rat	NOAEL 2,000 mg/kg	

**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

**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.

#### Physical Hazards

Not applicable

#### Health Hazards

Not applicable

### 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:** 0 **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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**Issue Date:** 02/07/18

**Version Number:** 5.01  
**Supersedes Date:** 02/06/18

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**Document Group:** 24-8564-7  
**Issue Date:** 08/10/17

**Version Number:** 6.00  
**Supersedes Date:** 02/25/16

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ ESPE™ PROTEMP™ PLUS BASE PASTE

#### Product Identification Numbers

LE-F100-0544-1, LE-F100-0714-9

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

##### Recommended use

Dental Material, Temporary crown and bridge material

##### 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

Not classified as hazardous according to OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### 2.2. Label elements

##### Signal word

Not applicable.

##### Symbols

Not applicable.

**Pictograms**

Not applicable.

**2.3. Hazards not otherwise classified****SECTION 3: Composition/information on ingredients**

Ingredient	C.A.S. No.	% by Wt
DIMETHACRYLATE (BISEMA6)	41637-38-1	45 - 55 Trade Secret *
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	None	20 - 30 Trade Secret *
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	1101874-33-2	10 - 15 Trade Secret *
SILANE TREATED SILICA	68909-20-6	5 - 10 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:**

No need for first aid is anticipated.

**Skin Contact:**

Wash with soap and water. 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

Irritant Vapors or Gases

**Condition**

During Combustion

During Combustion

During Combustion

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

No special protective actions for fire-fighters are anticipated.

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

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**

Avoid prolonged or repeated skin contact. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

**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
Ethyl Acetate	141-78-6	OSHA	TWA:1400 mg/m3(400 ppm)	
Ethyl Acetate	141-78-6	ACGIH	TWA:400 ppm	
SILICA, AMORPHOUS	68909-20-6	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit  
CEIL: Ceiling

## 8.2. Exposure controls

### 8.2.1. Engineering controls

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

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

#### Skin/hand protection

See Section 7.1 for additional information on skin protection.

#### Respiratory protection

None required.

## SECTION 9: Physical and chemical properties

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

General Physical Form:	Solid Paste
Specific Physical Form:	Paste
Odor, Color, Grade:	tooth colored paste, slight acrylic odor
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Boiling Point	<i>No Data Available</i>
Flash Point	No flash point
Evaporation rate	<i>No Data Available</i>
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	<i>No Data Available</i>
Vapor Density	<i>No Data Available</i>
Density	1.3 - 1.4 g/cm <sup>3</sup>
Specific Gravity	1.3 - 1.4 [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>
Molecular weight	<i>No Data Available</i>
Volatile Organic Compounds	<i>Not Applicable</i>
Percent volatile	<i>Not Applicable</i>
VOC Less H <sub>2</sub> O & Exempt Solvents	<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****Condition**

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

**SECTION 11: Toxicological information**

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

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

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

**11.1. Information on Toxicological effects****Signs and Symptoms of Exposure**

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

**Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**Ingestion:**

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

**Toxicological Data**

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

**Acute Toxicity**

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
DIMETHACRYLATE (BISEMA6)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
DIMETHACRYLATE (BISEMA6)	Ingestion	Rat	LD50 > 2,000 mg/kg
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Dermal	Rabbit	LD50 > 5,000 mg/kg
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Ingestion	Rat	LD50 > 5,110 mg/kg
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	Dermal		LD50 estimated to be 2,000 - 5,000 mg/kg
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	Ingestion	Rat	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
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
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Rabbit	No significant irritation
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	Rabbit	Minimal irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
Ethyl Acetate	Rabbit	Minimal irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
Overall product	Rabbit	Mild irritant
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Rabbit	No significant irritation
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	In vitro data	No significant irritation

SILANE TREATED SILICA	Rabbit	No significant irritation
Ethyl Acetate	Rabbit	Mild irritant

### Skin Sensitization

Name	Species	Value
DIMETHACRYLATE (BISEMA6)	Guinea pig	Not classified
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Human and animal	Not classified
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	Mouse	Not classified
SILANE TREATED SILICA	Human and animal	Not classified
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
DIMETHACRYLATE (BISEMA6)	In Vitro	Not mutagenic
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	In Vitro	Not mutagenic
REACTION PRODUCTS OF 1,6-DIISOCYANATOHEXANE WITH 2-[(2-METHACRYLOYL)ETHYL]6-HYDROXYHEXANOATE AND 2-HYDROXYETHYL METHACRYLATE (DESMA)	In Vitro	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic
Ethyl Acetate	In Vitro	Not mutagenic
Ethyl Acetate	In vivo	Not mutagenic

### Carcinogenicity

Name	Route	Species	Value
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
SILANE TREATED SILICA	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
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	1 generation

SILANE TREATED SILICA	Ingestion	Not classified for development	Rat	mg/kg/day NOAEL 1,350 mg/kg/day	during organogenesis
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**Target Organ(s)****Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
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
Amorphous silica (7631-86-9), surface modified with 2-propenoic acid, methyl-, 3-(trimethoxysilyl)propyl ester (2530-80-0) and phenyltrimethoxy silane (2996-92-1)	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
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.

#### 311/312 Hazard Categories:

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

#### EPCRA 311/312 Hazard Classifications (effective January 1, 2018):

##### Physical Hazards

Not applicable

##### Health Hazards

Not applicable

### 15.2. State Regulations

Contact 3M for more information.

#### California Proposition 65

<u><b>Ingredient</b></u>	<u><b>C.A.S. No.</b></u>	<u><b>Classification</b></u>
Toluene	108-88-3	Developmental Toxin

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

### 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:** 0 **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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