



## Safety Data Sheet

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<b>Issue Date:</b>	04/15/15	<b>Supersedes Date:</b>	05/08/12

### Product identifier

3M™ ESPE™ PERMADYNE PENTA L

### ID Number(s):

70-2011-3017-9

### Recommended use

Dental Product, IMPRESSIONS

### Restrictions on use

For use only by dental professionals

### 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)

### 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:**

16-5629-7, 16-5631-3

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## Safety Data Sheet

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**Document Group:** 16-5629-7  
**Issue Date:** 08/09/18

**Version Number:** 5.02  
**Supersedes Date:** 06/12/18

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ PERMADYNE Light Body Consistency Base / PERMADYNE PENTA L Base

#### Product Identification Numbers

LE-FSFD-3001-0, 70-2011-0634-4, EF-SFD6-3001-0

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

##### Recommended use

Dental Product, Impression 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

Serious Eye Damage/Irritation: Category 2B.

Skin Sensitizer: Category 1A.

#### 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**

Ingredient	C.A.S. No.	% by Wt
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	110531-92-5	60 - 80 Trade Secret *
DIBENZYL TOLUENE	26898-17-9	10 - 20 Trade Secret *
FATTY ACIDS TRIGLYCERIDES	67701-27-3	1 - 10 Trade Secret *
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	< 5 Trade Secret *
POLYETHYLENE-POLYPROPYLENE GLYCOL	9003-11-6	< 5 Trade Secret *
C.I. PIGMENT WHITE 5	1345-05-7	< 2 Trade Secret *
1-DODECYLIMIDAZOLE	4303-67-7	< 1 Trade Secret *
SWEET ORANGE PEEL TINCTURE	8028-48-6	< 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  
Irritant Vapors or Gases

**Condition**

During Combustion  
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**

Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Do not get in eyes. 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**

Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

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

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

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional Comments</b>
BARIUM, SOLUBLE COMPOUNDS	1345-05-7	ACGIH	TWA(as Ba):0.5 mg/m3	A4: Not class. as human carcin
BARIUM, SOLUBLE COMPOUNDS	1345-05-7	OSHA	TWA(as Ba):0.5 mg/m3	
Cristobalite	68855-54-9	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Cristobalite	68855-54-9	OSHA	TWA concentration(respirable):0.05 mg/m3(1.2 millions of particles/cu. ft.);TWA:0.05 mg/m3	
SILICA, AMORPHOUS	68855-54-9	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:	characteristic odor, orange colored, paste
Odor threshold	<i>No Data Available</i>
pH	<i>Not Applicable</i>
Melting point	<i>No Data Available</i>
Boiling Point	<i>Not Applicable</i>
Flash Point	Flash point > 93 °C (200 °F)
Evaporation rate	<i>Not Applicable</i>
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	<i>Not Applicable</i>
Flammable Limits(UEL)	<i>Not Applicable</i>
Vapor Pressure	<i>Not Applicable</i>
Vapor Density	<i>Not Applicable</i>
Density	<i>No Data Available</i>
Specific Gravity	>= 1 [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>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 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**

Strong acids

Strong bases

Strong oxidizing agents

**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:**

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.

<b><u>Ingredient</u></b>	<b><u>CAS No.</u></b>	<b><u>Class Description</u></b>	<b><u>Regulation</u></b>
SILICA, CRYSTALLINE	68855-54-9	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYSTALLINE	68855-54-9	Known human carcinogen	National Toxicology Program Carcinogens
Generic: Cristobalite	68855-54-9	Grp. 1: Carcinogenic to humans	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>
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Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Dermal	Professional judgement	LD50 Not applicable
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Ingestion	Rat	LD50 > 2,000 mg/kg
DIBENZYL TOLUENE	Dermal	Rabbit	LD50 > 2,000 mg/kg
DIBENZYL TOLUENE	Ingestion	Rat	LD50 > 10,360 mg/kg
FATTY ACIDS TRIGLYCERIDES	Dermal	Rabbit	LD50 > 2,000 mg/kg
FATTY ACIDS TRIGLYCERIDES	Ingestion	Rat	LD50 > 2,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.7 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	Rat	LD50 > 2,000 mg/kg
C.I. PIGMENT WHITE 5	Ingestion	Rat	LD50 > 15,000 mg/kg
C.I. PIGMENT WHITE 5	Dermal	similar compounds	LD50 > 1,000 mg/kg
C.I. PIGMENT WHITE 5	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 2.52 mg/l
POLYETHYLENE-POLYPROPYLENE GLYCOL	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
POLYETHYLENE-POLYPROPYLENE GLYCOL	Ingestion	Rat	LD50 5,700 mg/kg
1-DODECYLIMIDAZOLE	Ingestion	Rat	LD50 641 mg/kg
SWEET ORANGE PEEL TINCTURE	Inhalation-Vapor (4 hours)	Mouse	LC50 > 3.14 mg/l
SWEET ORANGE PEEL TINCTURE	Dermal	Rabbit	LD50 > 5,000 mg/kg
SWEET ORANGE PEEL TINCTURE	Ingestion	Rat	LD50 4,400 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Rabbit	No significant irritation
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In vitro data	No significant irritation
1-DODECYLIMIDAZOLE	Rabbit	Mild irritant
SWEET ORANGE PEEL TINCTURE	Rabbit	Mild irritant

**Serious Eye Damage/Irritation**

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Rabbit	Moderate irritant
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Rabbit	Mild irritant
1-DODECYLIMIDAZOLE	In vitro data	Severe irritant
SWEET ORANGE PEEL TINCTURE	Rabbit	Mild irritant

**Skin Sensitization**

Name	Species	Value
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	Guinea pig	Not classified
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Mouse	Not classified
1-DODECYLIMIDAZOLE	Mouse	Sensitizing

SWEET ORANGE PEEL TINCTURE	Mouse	Sensitizing
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### 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
Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate]	In Vitro	Not mutagenic
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In Vitro	Some positive data exist, but the data are not sufficient for classification
1-DODECYLIMIDAZOLE	In Vitro	Not mutagenic
SWEET ORANGE PEEL TINCTURE	In Vitro	Not mutagenic
SWEET ORANGE PEEL TINCTURE	In vivo	Not mutagenic

### Carcinogenicity

Name	Route	Species	Value
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	Human and animal	Carcinogenic
SWEET ORANGE PEEL TINCTURE	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
SWEET ORANGE PEEL TINCTURE	Ingestion	Not classified for female reproduction	Rat	NOAEL 750 mg/kg/day	prematuring & during gestation
SWEET ORANGE PEEL TINCTURE	Ingestion	Not classified for development	Multiple animal species	NOAEL 591 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
SWEET ORANGE PEEL TINCTURE	Ingestion	nervous system	Not classified		NOAEL Not available	

#### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	hematopoietic system   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 3,738 mg/kg/day	90 days
SWEET ORANGE PEEL TINCTURE	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 75 mg/kg/day	103 weeks
SWEET ORANGE PEEL TINCTURE	Ingestion	liver	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks
SWEET ORANGE PEEL TINCTURE	Ingestion	heart   endocrine system   bone, teeth, nails, and/or hair   hematopoietic system   immune	Not classified	Rat	NOAEL 600 mg/kg/day	103 weeks

		system   muscles   nervous system   respiratory system				
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**Aspiration Hazard**

Name	Value
SWEET ORANGE PEEL TINCTURE	Aspiration hazard

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):** D005 (Barium)

**SECTION 14: Transport Information**

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

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

Contact 3M for more information.

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

Not applicable

**Health Hazards**

Respiratory or Skin Sensitization

Serious eye damage or eye irritation

**Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):**

**Ingredient**

**C.A.S. No**

**% by Wt**

C.I. PIGMENT WHITE 5 (Barium compounds, except barium sulfate)	1345-05-7	< 2
C.I. PIGMENT WHITE 5 (ZINC COMPOUNDS)	1345-05-7	< 2

## 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>Listing</b></u>
HEXANE	110-54-3	Male reproductive toxin

## 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.

<b>Document Group:</b>	16-5629-7	<b>Version Number:</b>	5.02
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**Document Group:** 16-5631-3  
**Issue Date:** 08/09/18

**Version Number:** 6.01  
**Supersedes Date:** 11/28/17

### SECTION 1: Identification

#### 1.1. Product identifier

PERMADYNE PENTA H / PERMADYNE PENTA L CATALYST

#### Product Identification Numbers

LE-FSFD-3122-7

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

##### Recommended use

Dental Product, Impression 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

Skin Sensitizer: Category 1B.

Specific Target Organ Toxicity (single exposure): Category 3.

#### 2.2. Label elements

##### Signal word

Warning

**Symbols**

Exclamation mark |

**Pictograms****Hazard Statements**

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

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

Use only in a well-ventilated area.

Wear protective gloves.

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

**Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

Call a POISON CENTER or doctor/physician if you feel unwell.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.

**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>
CITRIC ESTER	77-90-7	30 - 50 Trade Secret *
SILANE TREATED SILICA	68909-20-6	10 - 30 Trade Secret *
SULFONIUM SALT	72140-65-9	10 - 30 Trade Secret *
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	68855-54-9	1 - 20 Trade Secret *
POLYETHYLENE-POLYPROPYLENE GLYCOL	9003-11-6	< 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:**

No need for first aid is anticipated.

**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**

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**

Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Do not get in eyes. 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

Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

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

<b>Ingredient</b>	<b>C.A.S. No.</b>	<b>Agency</b>	<b>Limit type</b>	<b>Additional Comments</b>
Cristobalite	68855-54-9	ACGIH	TWA(respirable fraction):0.025 mg/m3	A2: Suspected human carcin.
Cristobalite	68855-54-9	OSHA	TWA concentration(respirable):0.05 mg/m3(1.2 millions of particles/cu. ft.);TWA:0.05 mg/m3	
SILICA, AMORPHOUS	68855-54-9	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
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. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

#### 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
<b>Specific Physical Form:</b>	Paste
<b>Odor, Color, Grade:</b>	characteristic odors, different colors, paste
<b>Odor threshold</b>	<i>No Data Available</i>
<b>pH</b>	<i>No Data Available</i>
<b>Melting point</b>	<i>No Data Available</i>
<b>Boiling Point</b>	<i>Not Applicable</i>
<b>Flash Point</b>	Flash point > 93 °C (200 °F)
<b>Evaporation rate</b>	<i>Not Applicable</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>Not Applicable</i>
<b>Vapor Density</b>	<i>Not Applicable</i>
<b>Density</b>	1.1 g/cm <sup>3</sup> - 1.4 g/cm <sup>3</sup> [Ref Std: WATER=1]
<b>Specific Gravity</b>	>= 1 [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>	40 - 150 Pa-s
<b>Volatile Organic Compounds</b>	<i>No Data Available</i>
<b>Percent volatile</b>	<i>No Data Available</i>
<b>VOC Less H<sub>2</sub>O &amp; Exempt Solvents</b>	<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**

Strong acids

Strong bases

Strong oxidizing agents

**10.6. Hazardous decomposition products**SubstanceCondition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

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

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

##### Inhalation:

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

##### Skin Contact:

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

##### Eye Contact:

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.

May cause additional health effects (see below).

#### Additional Health Effects:

##### Single exposure may cause 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.

##### 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
SILICA, CRYSTALLINE	68855-54-9	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYSTALLINE	68855-54-9	Known human carcinogen	National Toxicology Program Carcinogens
Generic: Cristobalite	68855-54-9	Grp. 1: Carcinogenic to humans	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 ATE2,000 - 5,000 mg/kg
CITRIC ESTER	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
CITRIC ESTER	Ingestion	Rat	LD50 > 25,000 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
SULFONIUM SALT	Dermal	Rat	LD50 > 2,000 mg/kg
SULFONIUM SALT	Ingestion	Rat	LD50 300-2,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.7 mg/l
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	Rat	LD50 > 2,000 mg/kg
POLYETHYLENE-POLYPROPYLENE GLYCOL	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
POLYETHYLENE-POLYPROPYLENE GLYCOL	Ingestion	Rat	LD50 5,700 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
SILANE TREATED SILICA	Rabbit	No significant irritation
SULFONIUM SALT	Rabbit	Mild irritant
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In vitro data	No significant irritation

**Serious Eye Damage/Irritation**

Name	Species	Value
SILANE TREATED SILICA	Rabbit	No significant irritation
SULFONIUM SALT	Rabbit	Mild irritant
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Rabbit	Mild irritant

**Skin Sensitization**

Name	Species	Value
SILANE TREATED SILICA	Human and animal	Not classified
SULFONIUM SALT	Mouse	Sensitizing
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Mouse	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
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SILANE TREATED SILICA	In Vitro	Not mutagenic
SULFONIUM SALT	In Vitro	Not mutagenic
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	In Vitro	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
SILANE TREATED SILICA	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	Human and animal	Carcinogenic

### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
SILANE TREATED SILICA	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
SULFONIUM SALT	Ingestion	Not classified for development	Rat	NOAEL 100 mg/kg/day	prematuring into lactation
SULFONIUM SALT	Ingestion	Toxic to female reproduction	Rat	NOAEL 30 mg/kg/day	prematuring into lactation
SULFONIUM SALT	Ingestion	Toxic to male reproduction	Rat	NOAEL 30 mg/kg/day	30 days

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
SULFONIUM SALT	Ingestion	respiratory system	Not classified	Rat	NOAEL 300 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
SULFONIUM SALT	Ingestion	bone marrow	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 10 mg/kg/day	30 days
SULFONIUM SALT	Ingestion	respiratory system	May cause damage to organs through prolonged or repeated exposure	Rat	NOAEL 30 mg/kg/day	30 days
SULFONIUM SALT	Ingestion	eyes	May cause damage to organs through prolonged or repeated exposure	Rat	NOAEL 100 mg/kg/day	30 days
SULFONIUM SALT	Ingestion	hematopoietic system   liver   immune system   kidney and/or bladder	Not classified	Rat	NOAEL 300 mg/kg/day	30 days
SULFONIUM SALT	Ingestion	gastrointestinal tract	Not classified	Rat	NOAEL 30 mg/kg/day	30 days
SULFONIUM SALT	Ingestion	auditory system   heart   skin   endocrine system	Not classified	Rat	NOAEL 300 mg/kg/day	30 days

		bone, teeth, nails, and/or hair   muscles   nervous system   vascular system				
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Flux calcined diatomaceous earth (cristobalite 1 - <10%)	Ingestion	hematopoietic system   eyes   kidney and/or bladder	Not classified	Rat	NOAEL 3,738 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

Respiratory or Skin Sensitization

Specific target organ toxicity (single or repeated exposure)

### 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.

<b>This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.</b>
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## 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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