

# **Safety Data Sheet**

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#### **Product identifier** 3M<sup>TM</sup> ESPE<sup>TM</sup> IMPRINT<sup>TM</sup> 4 HEAVY Intro Kit

**ID** Number(s):

70-2011-4232-3

### Recommended use

Dental Product, Impression Material **Restrictions on use** For use only by dental professionals.

Supplier's details

MANUFACTURER:	3M
DIVISION:	3M ESPE Dental Products

ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

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:

### 31-4841-8, 31-4872-3, 17-9416-3, 31-4882-2, 31-4863-2, 31-4879-8, 31-4838-4

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# **Safety Data Sheet**

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Document Group:	17-9416-3	Version Number:	7.01
Issue Date:	11/30/15	Supercedes Date:	10/30/14

### **SECTION 1: Identification**

**1.1. Product identifier** VPS Tray Adhesive

**Product Identification Numbers** 70-2011-0649-2

### 1.2. Recommended use and restrictions on use

Recommended use Dental Product, Tray adhesive. Restrictions on use For use only by dental professionals.

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

**1.4. Emergency telephone number** 1-800-364-3577 or (651) 737-6501 (24 hours)

### **SECTION 2: Hazard identification**

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

**2.1. Hazard classification** Flammable Liquid: Category 2. Specific Target Organ Toxicity (central nervous system): Category 3.

2.2. Label elements Signal word Danger

Symbols

Flame | Exclamation mark |

### **Pictograms**



Hazard Statements Highly flammable liquid and vapor.

May cause drowsiness or dizziness.

### **Precautionary Statements**

### **Prevention:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container tightly closed. Use explosion-proof electrical/ventilating/lighting equipment. Use only in a well-ventilated area. Wear protective gloves and eye/face protection.

### **Response:**

IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell. In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

### Storage:

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

### **Disposal:**

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

**2.3. Hazards not otherwise classified** None.

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

Ingredient	C.A.S. No.	% by Wt
ETHYL ACETATE	141-78-6	70 - 80 Trade Secret *
POLY(DIMETHYLSILOXANE)	63148-62-9	20 - 30 Trade Secret *
NAPHTHA	64742-48-9	1 - 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. Do not induce vomiting. Get immediate medical attention.

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

## **SECTION 5: Fire-fighting measures**

### 5.1. Suitable extinguishing media

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

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

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

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

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

### **SECTION 6: Accidental release measures**

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

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

### **6.2. Environmental precautions**

Avoid release to the environment.

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

Contain spill. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. 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 SDS. Seal the container. Dispose of collected material as soon as possible.

### **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Avoid breathing of dust created by cutting, sanding, grinding or machining. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact

with oxidizing agents (eg. chlorine, chromic acid etc.) 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 cool. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidizing agents.

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

### 8.1. Control parameters

### **Occupational exposure limits**

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

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
ETHYL ACETATE	141-78-6	ACGIH	TWA:400 ppm	
ETHYL ACETATE	141-78-6	OSHA	TWA:1400 mg/m3(400 ppm)	
NAPHTHA	64742-48-9	Manufacturer	TWA:100 ppm	
		determined		

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

#### 8.2.1. Engineering controls

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

### **Eye/face protection**

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

#### **Skin/hand protection**

See Section 7.1 for additional information on skin protection.

#### **Respiratory protection**

None required.

# **SECTION 9: Physical and chemical properties**

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

General Physical Form:	Liquid
Specific Physical Form:	Viscous
Odor, Color, Grade:	Orange liquid with characteristic organic solvent odor.
Odor threshold	No Data Available
рН	No Data Available

Melting point	No Data Available
Boiling Point	169 °F
Flash Point	25 °F [Test Method: Closed Cup]
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	1.2 %
Flammable Limits(UEL)	11.5 %
Vapor Pressure	131 mmHg
Vapor Density	> 1 [ <i>Ref Std:</i> AIR=1]
Density	No Data Available
Specific Gravity	> 1 [ <i>Ref Std:</i> WATER=1]
Solubility in Water	Nil
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

Sparks and/or flames Heat

### **10.5. Incompatible materials**

Strong acids

### 10.6. Hazardous decomposition products

Substance Formaldehyde Carbon monoxide Carbon dioxide

### Condition

Oxidation, heat or reaction Oxidation, heat or reaction Oxidation, heat or reaction

# **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.

May cause additional health effects (see below).

#### **Skin Contact:**

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

#### **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.

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.

#### **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	Inhalation- Vapor(4 hr)		No data available; calculated ATE > 50 mg/l
Overall product	Ingestion		No data available; calculated ATE > 5,000 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
POLY(DIMETHYLSILOXANE)	Dermal	Rabbit	LD50 > 19,400 mg/kg
POLY(DIMETHYLSILOXANE)	Ingestion	Rat	LD50 > 17,000 mg/kg
NAPHTHA	Inhalation- Vapor		LC50 estimated to be 20 - 50 mg/l
NAPHTHA	Dermal	Rabbit	LD50 > 3,000 mg/kg
NAPHTHA	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

### **Skin Corrosion/Irritation**

### VPS Tray Adhesive 11/30/15

Name	Species	Value
ETHYL ACETATE	Rabbit	Minimal irritation
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation
NAPHTHA	Rabbit	Irritant

### Serious Eye Damage/Irritation

Name	Species	Value
ETHYL ACETATE	Rabbit	Mild irritant
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation
NAPHTHA	Rabbit	No significant irritation

### **Skin Sensitization**

Name	Species	Value
ETHYL ACETATE	Guinea	Not sensitizing
	pig	
NAPHTHA	Guinea	Not sensitizing
	pig	

### **Respiratory Sensitization**

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

### Germ Cell Mutagenicity

Name	Route	Value
ETHYL ACETATE	In Vitro	Not mutagenic
ETHYL ACETATE	In vivo	Not mutagenic
NAPHTHA	In vivo	Not mutagenic
NAPHTHA	In Vitro	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
NAPHTHA	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
NAPHTHA	Inhalation	Human and animal	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
NAPHTHA	Inhalation	Not toxic to development	Rat	NOAEL 2.4 mg/l	during organogenesi s

### 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	May cause drowsiness or	Human	NOAEL Not	
		system depression	dizziness		available	
ETHYL ACETATE	Inhalation	respiratory irritation	Some positive data exist, but the	Human	NOAEL Not	
			data are not sufficient for		available	
			classification			
ETHYL ACETATE	Ingestion	central nervous	May cause drowsiness or	Human	NOAEL Not	
		system depression	dizziness		available	

#### VPS Tray Adhesive 11/30/15

NAPHTHA	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	
NAPHTHA	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
NAPHTHA	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Dog	NOAEL 6.5 mg/l	4 hours
NAPHTHA	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	

### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
ETHYL ACETATE	Inhalation	endocrine system   liver   nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.043 mg/l	90 days
ETHYL ACETATE	Inhalation	hematopoietic system	Some positive data exist, but the data are not sufficient for classification	Rabbit	LOAEL 16 mg/l	40 days
ETHYL ACETATE	Ingestion	hematopoietic system   liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 3,600 mg/kg/day	90 days
NAPHTHA	Inhalation	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 4.6 mg/l	6 months
NAPHTHA	Inhalation	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 1.9 mg/l	13 weeks
NAPHTHA	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 0.6 mg/l	90 days
NAPHTHA	Inhalation	bone, teeth, nails, and/or hair   blood   liver   muscles	All data are negative	Rat	NOAEL 5.6 mg/l	12 weeks
NAPHTHA	Inhalation	heart	All data are negative	Multiple animal species	NOAEL 1.3 mg/l	90 days

#### **Aspiration Hazard**

Name	Value
NAPHTHA	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.

Incinerate in a permitted waste incineration facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

### **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 - Yes Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - No

#### **15.2. State Regulations**

Contact 3M for more information.

### **15.3.** Chemical Inventories

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

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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: 3 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>	17-9416-3	Version Number:	7.01
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### **Issue Date:** 11/30/15 **Supercedes Date:** 10/30/14

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Document Group:	31-4841-8	Version Number:	2.00
Issue Date:	10/09/14	Supercedes Date:	01/03/13

## **SECTION 1: Identification**

### 1.1. Product identifier

 $3 M^{\mbox{tm}}$  ESPE $^{\mbox{tm}}$  IMPRINT $^{\mbox{tm}}$  4 HEAVY CATALYST

**Product Identification Numbers** LE-F100-1307-3

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

Recommended use Dental Product, Impression Material Restrictions on use For us only by dental professionals

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

**1.4. Emergency telephone number** 

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

### **SECTION 2: Hazard identification**

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

### 2.1. Hazard classification

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**

Ingredient	C.A.S. No.	% by Wt
VINYL-POLYDIMETHYLSILOXANE	68083-19-2	30 - 40 Trade Secret *
CRISTOBALITE	14464-46-1	30 - 40 Trade Secret *
FUSED SILICA	60676-86-0	10 - 20 Trade Secret *
POLY(DIMETHYLSILOXANE)	63148-62-9	1 - 10 Trade Secret *
SILANE TREATED SILICA	67762-90-7	1 - 10 Trade Secret *
TRIDYMITE	15468-32-3	1 - 10 Trade Secret *
QUARTZ SILICA	14808-60-7	< 0.3 Trade Secret *

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

### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

### Inhalation:

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

### Skin Contact:

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 <u>Condition</u> During Combustion Carbon dioxide Irritant Vapors or Gases 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. Dispose of collected material as soon as possible.

### **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 contact with oxidizing agents (eg. chlorine, chromic acid etc.)

#### 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. Store away from amines.

# **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
CRISTOBALITE	14464-46-1	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
CRISTOBALITE	14464-46-1	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.)	
TRIDYMITE	15468-32-3	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	

			mg/m3(1.2 millions of particles/cu. ft.)	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
SILANE TREATED SILICA	67762-90-7	CMRG	CEIL:5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

### 8.2.1. Engineering controls

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

### **Eye/face protection**

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

#### **Skin/hand protection**

See Section 7.1 for additional information on skin protection.

#### **Respiratory protection**

Respiratory protection is not required.

### **SECTION 9: Physical and chemical properties**

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

General Physical Form:	Solid	
Specific Physical Form:	Paste	
Odor, Color, Grade:	slight characteristic odor, blue colored paste	
Odor threshold	No Data Available	
рН	No Data Available	
Melting point	Not Applicable	
Boiling Point	Not Applicable	
Flash Point	Flash point > 93 °C (200 °F)	
Evaporation rate	No Data Available	
Flammability (solid, gas)	Not Classified	
Flammable Limits(LEL)	Not Applicable	
Flammable Limits(UEL)	Not Applicable	
Vapor Pressure	No Data Available	
Vapor Density	No Data Available	
Density	1.4 g/cm3 - 1.6 g/cm3	
Specific Gravity	1.4 - 1.6 [ <i>Ref Std:</i> WATER=1]	

Solubility in Water Solubility- non-water Partition coefficient: n-octanol/ water Autoignition temperature Decomposition temperature Viscosity Volatile Organic Compounds Percent volatile VOC Less H2O & Exempt Solvents Negligible No Data Available Not Applicable No Data Available No Data Available Not Data Available Not Applicable Not Applicable Not Applicable

### **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

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

# **10.2. Chemical stability** Stable.

**10.3. Possibility of hazardous reactions** Hazardous polymerization will not occur.

**10.4. Conditions to avoid** Heat

**10.5. Incompatible materials** Amines Strong acids Strong bases Strong oxidizing agents

### 10.6. Hazardous decomposition products

<u>Substance</u>

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

# **SECTION 11: Toxicological information**

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be 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

### **Condition**

### 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.

### 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	C.A.S. No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14464-46-1	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	15468-32-3	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	15468-32-3	Known human carcinogen	National Toxicology Program Carcinogens
CRISTOBALITE	14464-46-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
QUARTZ SILICA	14808-60-7	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 ATE > 5,000 mg/kg
VINYL-POLYDIMETHYLSILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYLSILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
CRISTOBALITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
CRISTOBALITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
FUSED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
FUSED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
FUSED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
POLY(DIMETHYLSILOXANE)	Dermal	Rabbit	LD50 > 19,400 mg/kg
POLY(DIMETHYLSILOXANE)	Ingestion	Rat	LD50 > 17,000 mg/kg
TRIDYMITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
TRIDYMITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
QUARTZ SILICA	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
QUARTZ SILICA	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
TE – acute toxicity estimate	÷ •	•	· · · · · · · · · · · · · · · · · · ·

ATE = acute toxicity estimate

### **Skin Corrosion/Irritation**

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	No significant irritation
CRISTOBALITE		No significant irritation

FUSED SILICA	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation
TRIDYMITE		No significant irritation
QUARTZ SILICA		No significant irritation

### Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	Mild irritant
FUSED SILICA	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation

### **Skin Sensitization**

Name	Species	Value
FUSED SILICA	Human	Not sensitizing
	and	
	animal	
SILANE TREATED SILICA	Human	Not sensitizing
	and	
	animal	

### **Respiratory Sensitization**

|--|

# Species

Value

### Germ Cell Mutagenicity

Name	Route	Value
CRISTOBALITE	In Vitro	Some positive data exist, but the data are not sufficient for classification
CRISTOBALITE	In vivo	Some positive data exist, but the data are not sufficient for classification
FUSED SILICA	In Vitro	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic
TRIDYMITE	In Vitro	Some positive data exist, but the data are not sufficient for classification
TRIDYMITE	In vivo	Some positive data exist, but the data are not sufficient for classification
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not sufficient for classification
QUARTZ SILICA	In vivo	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
CRISTOBALITE	Inhalation	Human	Carcinogenic
		and	
		animal	
FUSED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
SILANE TREATED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
TRIDYMITE	Inhalation	Human	Carcinogenic
		and	
		animal	
QUARTZ SILICA	Inhalation	Human	Carcinogenic
		and	
		animal	

### **Reproductive Toxicity**

### **Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
FUSED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509	1 generation

FUSED SILICA	Inhalation	Not toxic to male reproduction	Rat	mg/kg/day NOAEL 497 mg/kg/day	1 generation
FUSED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
SILANE TREATED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s

### Target Organ(s)

### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
						Duration

### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CRISTOBALITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
FUSED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
TRIDYMITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

### **Aspiration Hazard**

Name

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.

Value

### **SECTION 12: Ecological information**

### **Ecotoxicological information**

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

### Chemical fate information

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

### **SECTION 13: Disposal considerations**

#### 13.1. Disposal methods

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

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal

facility. If no other disposal options are available, waste product 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

### **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.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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.

<b>Document Group:</b>	31-4841-8	Version Number:	2.00
Issue Date:	10/09/14	Supercedes Date:	01/03/13

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# Safety Data Sheet

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Document Group:	31-4872-3	Version Number:	2.00
Issue Date:	07/07/14	Supercedes Date:	01/03/13

### **SECTION 1: Identification**

### 1.1. Product identifier

 $3M^{\text{TM}} ESPE^{\text{TM}} IMPRINT^{\text{TM}} 4 LIGHT CATALYST$ 

**Product Identification Numbers** LE-F100-1309-6

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

Recommended use Dental Product, Impression Material Restrictions on use For us only by dental professionals.

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

**1.4. Emergency telephone number** 

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

### **SECTION 2: Hazard identification**

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

### 2.1. Hazard classification

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**

Ingredient	C.A.S. No.	% by Wt
VINYL-POLYDIMETHYLSILOXANE	68083-19-2	40 - 60 Trade Secret *
CRISTOBALITE	14464-46-1	20 - 40 Trade Secret *
FUSED SILICA	60676-86-0	5 - 20 Trade Secret *
POLY(DIMETHYLSILOXANE)	63148-62-9	1 - 10 Trade Secret *
SILANE TREATED SILICA	67762-90-7	1 - 10 Trade Secret *
TRIDYMITE	15468-32-3	< 2 Trade Secret *
QUARTZ SILICA	14808-60-7	< 0.3 Trade Secret *

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

### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

### Inhalation:

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

#### **Skin Contact:**

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

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

#### 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. Store away from amines.

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

#### **8.1.** Control parameters

#### **Occupational exposure limits**

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
CRISTOBALITE	14464-46-1	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
CRISTOBALITE	14464-46-1	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.)	
TRIDYMITE	15468-32-3	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	

			particles/cu. ft.)		
SILANE TREATED SILICA	67762-90-7	CMRG	CEIL:5 mg/m3		
ACGIH : American Conference of Governmental Industrial Hygienists					

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

#### **8.2. Exposure controls**

#### **8.2.1. Engineering controls**

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

#### **Eye/face protection**

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

Skin/hand protection

No chemical protective gloves are required. 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:	slight characteristic odor, pink colored paste
Odor threshold	No Data Available
рН	No Data Available
Melting point	Not Applicable
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	1.2 g/cm3 - 1.4 g/cm3
Specific Gravity	1.2 - 1.4 [ <i>Ref Std:</i> WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	Not Applicable
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Volatile Organic Compounds	Not Applicable
Percent volatile	Not Applicable

VOC Less H2O & Exempt Solvents Not Applicable

### **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

This material 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** Amines Strong acids Strong bases Strong oxidizing agents

**10.6. Hazardous decomposition products** <u>Substance</u> 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.

### **Eye Contact:**

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

#### **Ingestion:**

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

### **Carcinogenicity:**

Exposures needed to cause the following health effect(s) are not expected during normal, intended use: Contains a chemical or chemicals which can cause cancer.

\_\_\_\_\_

Ingredient	<u>C.A.S. No.</u>	Class Description	Regulation
CRISTOBALITE	14464-46-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
QUARTZ SILICA	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	14464-46-1	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	15468-32-3	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	15468-32-3	Known human carcinogen	National Toxicology Program Carcinogens

### **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
VINYL-POLYDIMETHYLSILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYLSILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
CRISTOBALITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
CRISTOBALITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
FUSED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
FUSED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
FUSED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
TRIDYMITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
TRIDYMITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
POLY(DIMETHYLSILOXANE)	Dermal	Rabbit	LD50 > 19,400 mg/kg
POLY(DIMETHYLSILOXANE)	Ingestion	Rat	LD50 > 17,000 mg/kg
QUARTZ SILICA	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
QUARTZ SILICA	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	No significant irritation
CRISTOBALITE		No significant irritation
FUSED SILICA	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
TRIDYMITE		No significant irritation
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation
QUARTZ SILICA		No significant irritation

### **Serious Eye Damage/Irritation**

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	Mild irritant

FUSED SILICA	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation

### Skin Sensitization

Name	Species	Value
FUSED SILICA	Human	Not sensitizing
	and	
	animal	
SILANE TREATED SILICA	Human	Not sensitizing
	and	
	animal	

### **Respiratory Sensitization**

Name Species Value
--------------------

### Germ Cell Mutagenicity

Name	Route	Value
CRISTOBALITE	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
CRISTOBALITE	In vivo	Some positive data exist, but the data are not
		sufficient for classification
FUSED SILICA	In Vitro	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic
TRIDYMITE	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
TRIDYMITE	In vivo	Some positive data exist, but the data are not
		sufficient for classification
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
QUARTZ SILICA	In vivo	Some positive data exist, but the data are not
		sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
CRISTOBALITE	Inhalation	Human	Carcinogenic
		and	
		animal	
FUSED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
SILANE TREATED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
TRIDYMITE	Inhalation	Human	Carcinogenic
		and	
		animal	
QUARTZ SILICA	Inhalation	Human	Carcinogenic
		and	
		animal	

### **Reproductive Toxicity**

### **Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
FUSED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
FUSED SILICA	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
FUSED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
SILANE TREATED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation

SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	NOAEL	during
				1,350	organogenesi
				mg/kg/day	s

### Target Organ(s)

### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
						Duration

### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CRISTOBALITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
FUSED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
TRIDYMITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

#### Aspiration Hazard

Name

Value

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. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

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

### **SECTION 14: Transport Information**

### 3MTM ESPETM IMPRINTTM 4 LIGHT CATALYST 07/07/14

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

### **SECTION 15: Regulatory information**

### **15.1. US Federal Regulations**

Contact 3M for more information.

### 311/312 Hazard Categories:

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

### **15.2. State Regulations**

Contact 3M for more information.

### **15.3.** Chemical Inventories

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

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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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# Safety Data Sheet

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Document Group:	31-4838-4	Version Number:	2.00
Issue Date:	12/16/14	Supercedes Date:	01/09/13

## **SECTION 1: Identification**

### 1.1. Product identifier

 $3M^{\mbox{tm}}$  espetm imprint  $^{\mbox{tm}}$  4 heavy base

**Product Identification Numbers** LE-F100-1307-2

### 1.2. Recommended use and restrictions on use

Recommended use Dental Product, Impression Material Restrictions on use For us only by dental professionals.

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

**1.4. Emergency telephone number** 

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

### **SECTION 2: Hazard identification**

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

### 2.1. Hazard classification

Skin Sensitizer: Category 1.

2.2. Label elements Signal word Warning

Symbols Exclamation mark | **Pictograms** 



Hazard Statements May cause an allergic skin reaction.

### **Precautionary Statements**

### **Prevention:**

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

#### **Response:**

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

#### **Disposal:**

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

2.3. Hazards not otherwise classified

None.

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

Ingredient	C.A.S. No.	% by Wt
CRISTOBALITE	14464-46-1	35 - 45 Trade Secret *
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	20 - 30 Trade Secret *
DIMETHYL METHYL HYDROGEN SILICONE	68037-59-2	1 - 10 Trade Secret *
FLUID		
SILANE TREATED SILICA	67762-90-7	1 - 10 Trade Secret *
FUSED SILICA	60676-86-0	1 - 10 Trade Secret *
TRIDYMITE	15468-32-3	< 5 Trade Secret *
POLY(DIMETHYLSILOXANE)	63148-62-9	< 5 Trade Secret *
ALLYLTRIMETHYLSILANE	762-72-1	< 5 Trade Secret *
POLYETHYLENE GLYCOL, SILOXANE	27306-78-1	< 5.0 Trade Secret *
TERMINATED		
QUARTZ SILICA	14808-60-7	< 1 Trade Secret *
CORNMINT OIL	68917-18-0	< 0.5 Trade Secret *

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

### **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

### Inhalation:

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

### **Skin Contact:**

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

### **Eye Contact:**

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

### If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

### **SECTION 5: Fire-fighting measures**

### 5.1. Suitable extinguishing media

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

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

None inherent in this product.

### Hazardous Decomposition or By-Products

<u>Substance</u> Carbon monoxide Carbon dioxide Irritant Vapors or Gases <u>Condition</u> 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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

#### **6.2.** Environmental precautions

Avoid release to the environment.

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

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

### **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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. Store away from amines.

# **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	<b>Additional Comments</b>
CRISTOBALITE	14464-46-1	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
CRISTOBALITE	14464-46-1	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.)	
TRIDYMITE	15468-32-3	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8	
			mg/m3;TWA:20 millions of	
			particles/cu. ft.	
SILANE TREATED SILICA	67762-90-7	CMRG	CEIL:5 mg/m3	
SILICA, AMORPHOUS	67762-90-7	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:	smell of mint, white colored paste
Odor threshold	No Data Available
рН	No Data Available
Melting point	Not Applicable
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	1.3 g/cm3 - 1.5 g/cm3
Specific Gravity	1.3 - 1.5 [ <i>Ref Std:</i> WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	Not Applicable
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Volatile Organic Compounds	Not Applicable
Percent volatile	Not Applicable
VOC Less H2O & Exempt Solvents	Not Applicable

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

This material 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 Amines

# 10.6. Hazardous decomposition products <u>Substance</u>

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:

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

### Ingestion:

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

### **Additional Health Effects:**

### **Carcinogenicity:**

Exposures needed to cause the following health effect(s) are not expected during normal, intended use: Contains a chemical or chemicals which can cause cancer.

	Ingredient	CAS No.	Class Description	Regulation
--	------------	---------	-------------------	------------

SILICA, CRYS AIRRESP	14464-46-1	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	15468-32-3	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	15468-32-3	Known human carcinogen	National Toxicology Program Carcinogens
CRISTOBALITE	14464-46-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
QUARTZ SILICA	14808-60-7	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	Dermal		No data available; calculated ATE > 5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE > 5,000 mg/kg
CRISTOBALITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
CRISTOBALITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
VINYL-POLYDIMETHYL SILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYL SILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Dermal	Rabbit	LD50 > 2,000 mg/kg
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Inhalation- Dust/Mist (4 hours)	Rat	LC50 4.2 mg/l
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Ingestion	Rat	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 2,000 mg/kg
SILANE TREATED SILICA	Inhalation-	Rat	LC50 > 0.691  mg/l
SILANE INLATED SILICA	Dust/Mist (4 hours)	Kat	LC30 > 0.091 ling/1
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
FUSED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
FUSED SILICA	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
FUSED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
ALLYLTRIMETHYLSILANE	Dermal	Professio nal judgeme nt	LD50 Not applicable
ALLYLTRIMETHYLSILANE	Ingestion	similar compoun ds	LD50 Not applicable
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Dermal	Rabbit	LD50 > 2,000 mg/kg
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Inhalation- Dust/Mist (4 hours)	Rat	LC50 2 mg/l
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Ingestion	Rat	LD50 > 2,000 mg/kg
POLY(DIMETHYLSILOXANE)	Dermal	Rabbit	LD50 > 19,400 mg/kg
POLY(DIMETHYLSILOXANE)	Ingestion	Rat	LD50 > 17,000 mg/kg
TRIDYMITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
TRIDYMITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
QUARTZ SILICA	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
QUARTZ SILICA	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
	Dermal	Rabbit	LD50 > 5,000 mg/kg
CORNMINT OIL	Dermai	Kabbit	$LD_{30} > 3.000 \text{ mg/kg}$

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name		Value
CRISTOBALITE		No significant irritation
VINYL-POLYDIMETHYL SILOXANE	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
FUSED SILICA	Rabbit	No significant irritation
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Rabbit	No significant irritation
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation

TRIDYMITE		No significant irritation
QUARTZ SILICA		No significant irritation
CORNMINT OIL	Rabbit	Mild irritant

### Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	Mild irritant
SILANE TREATED SILICA	Rabbit	No significant irritation
FUSED SILICA	Rabbit	No significant irritation
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Rabbit	Severe irritant
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation
CORNMINT OIL	In vitro	Severe irritant
	data	

### **Skin Sensitization**

Name	Species	Value
SILANE TREATED SILICA	Human	Not sensitizing
	and	
	animal	
FUSED SILICA	Human	Not sensitizing
	and	
	animal	
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Guinea	Not sensitizing
	pig	
CORNMINT OIL	Guinea	Sensitizing
	pig	

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

### Germ Cell Mutagenicity

Name	Route	Value		
CRISTOBALITE	In Vitro	Some positive data exist, but the data are not sufficient for classification		
CRISTOBALITE	In vivo	Some positive data exist, but the data are not sufficient for classification		
SILANE TREATED SILICA	In Vitro	Not mutagenic		
FUSED SILICA	In Vitro	Not mutagenic		
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	In Vitro	Not mutagenic		
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	In vivo	Not mutagenic		
TRIDYMITE	In Vitro	Some positive data exist, but the data are not sufficient for classification		
TRIDYMITE	In vivo	Some positive data exist, but the data are not sufficient for classification		
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not sufficient for classification		
QUARTZ SILICA	In vivo	Some positive data exist, but the data are not sufficient for classification		

### Carcinogenicity

Name	Route	Species	Value
CRISTOBALITE	Inhalation	Human	Carcinogenic
		and	
		animal	
SILANE TREATED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
FUSED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
TRIDYMITE	Inhalation	Human	Carcinogenic
		and	
		animal	
QUARTZ SILICA	Inhalation	Human	Carcinogenic
		and	

animal

### **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 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
FUSED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
FUSED SILICA	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
FUSED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 450 mg/kg/day	premating & during gestation

### 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
CRISTOBALITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
FUSED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
TRIDYMITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	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 completely cured (or polymerized) material in a permitted industrial waste 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 <u>http://3M.com/Transportinfo</u> or call 1-800-364-3577 or 651-737-6501.

## **SECTION 15: Regulatory information**

### **15.1. US Federal Regulations**

Contact 3M for more information.

### 311/312 Hazard Categories:

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

### **15.2. State Regulations**

Contact 3M for more information.

### **15.3.** Chemical Inventories

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

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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

Contact 3M for more information.

### **15.4. International Regulations**

Contact 3M for more information.

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

## **SECTION 16: Other information**

### NFPA Hazard Classification

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

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

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Issue Date:	12/16/14	Supercedes Date:	01/09/13

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Document Group:	31-4882-2	Version Number:	2.00
Issue Date:	10/10/14	Supercedes Date:	01/04/13

## **SECTION 1: Identification**

### 1.1. Product identifier

 $3M^{\text{tm}} \text{ ESPE}^{\text{tm}} \text{IMPRINT}^{\text{tm}} 4 \text{ REGULAR CATALYST}$ 

**Product Identification Numbers** LE-F100-1310-0

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

**1.4. Emergency telephone number** 

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

## **SECTION 2: Hazard identification**

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

### 2.1. Hazard classification

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**

Ingredient	C.A.S. No.	% by Wt
VINYL-POLYDIMETHYLSILOXANE	68083-19-2	40 - 60 Trade Secret *
CRISTOBALITE	14464-46-1	20 - 40 Trade Secret *
FUSED SILICA	60676-86-0	5 - 20 Trade Secret *
POLY(DIMETHYLSILOXANE)	63148-62-9	1 10 Trade Secret *
SILANE TREATED SILICA	67762-90-7	1 - 10 Trade Secret *
C.I. PIGMENT YELLOW 109	5045-40-9	< 2 Trade Secret *
TRIDYMITE	15468-32-3	< 2 Trade Secret *
COBALT TITANATE GREEN SPINEL	68186-85-6	< 0.9 Trade Secret *
QUARTZ SILICA	14808-60-7	< 0.3 Trade Secret *

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

## **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

### Inhalation:

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

### Skin Contact:

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

### **3MTM ESPETMIMPRINTTM 4 REGULAR CATALYST** 10/10/14

<u>Substance</u> Carbon monoxide Carbon dioxide Irritant Vapors or Gases <u>Condition</u> 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. Dispose of collected material as soon as possible.

## **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 contact with oxidizing agents (eg. chlorine, chromic acid etc.)

### 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. Store away from amines.

## **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	<b>Additional Comments</b>
CRISTOBALITE	14464-46-1	ACGIH	TWA(respirable A2: Suspected h	
			fraction):0.025 mg/m3	carcin.
CRISTOBALITE	14464-46-1	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.)	
TRIDYMITE	15468-32-3	OSHA	TWA concentration(as total	

			dust):0.15 mg/m3;TWA	
			, <u> </u>	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8	
			mg/m3;TWA:20 millions of	
			particles/cu. ft.	
SILICA, AMORPHOUS	67762-90-7	OSHA	TWA concentration:0.8	
			mg/m3;TWA:20 millions of	
			particles/cu. ft.	
SILANE TREATED SILICA	67762-90-7	CMRG	CEIL:5 mg/m3	
Cobalt, inorganic compounds	68186-85-6	ACGIH	TWA(as Co):0.02 mg/m3	A3: Confirmed animal
				carcin.

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### 8.2. Exposure controls

### 8.2.1. Engineering controls

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

### Eye/face protection

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

### Skin/hand protection

See Section 7.1 for additional information on skin protection.

### **Respiratory protection**

Respiratory protection is not required.

## **SECTION 9: Physical and chemical properties**

## 9.1. Information on basic physical and chemical properties

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	Slight characteristic odor; white colored paste
Odor threshold	No Data Available
pH	Not Applicable
Melting point	Not Applicable
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable

Vapor Pressure
Vapor Density
Density
Specific Gravity
Solubility in Water
Solubility- non-water
Partition coefficient: n-octanol/ water
Autoignition temperature
Decomposition temperature
Viscosity
Volatile Organic Compounds
Percent volatile
VOC Less H2O & Exempt Solvents

No Data Available No Data Available 1.2 g/cm3 - 1.4 g/cm3 1.2 - 1.4 [Ref Std: WATER=1] Negligible No Data Available No Data Available Not Applicable No Data Available No Data Available No Data Available Not Applicable Not Applicable Not Applicable

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

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

## **10.2.** Chemical stability

Stable.

### **10.3.** Possibility of hazardous reactions

Hazardous polymerization will not occur.

# **10.4. Conditions to avoid** Heat

### **10.5. Incompatible materials**

Amines 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.

### **Eye Contact:**

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

### **Ingestion:**

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

### **Carcinogenicity:**

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

Contains a chemical or chemicals which can cause cancer.

Ingredient	C.A.S. No.	Class Description	Regulation
SILICA, CRYS AIRRESP	14464-46-1	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	15468-32-3	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	15468-32-3	Known human carcinogen	National Toxicology Program Carcinogens
Generic: Cobalt and inorganic cobalt	68186-85-6	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
compounds			
CRISTOBALITE	14464-46-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
QUARTZ SILICA	14808-60-7	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 ATE > 5,000 mg/kg
VINYL-POLYDIMETHYLSILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYLSILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
CRISTOBALITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
CRISTOBALITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
FUSED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
FUSED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
FUSED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
TRIDYMITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
TRIDYMITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
POLY(DIMETHYLSILOXANE)	Dermal	Rabbit	LD50 > 19,400 mg/kg
POLY(DIMETHYLSILOXANE)	Ingestion	Rat	LD50 > 17,000 mg/kg
QUARTZ SILICA	Dermal		LD50 estimated to be > 5,000 mg/kg
QUARTZ SILICA	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$

## ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	No significant irritation
CRISTOBALITE		No significant irritation
FUSED SILICA	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
TRIDYMITE		No significant irritation
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation
QUARTZ SILICA		No significant irritation

### Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYLSILOXANE	Rabbit	Mild irritant
FUSED SILICA	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
POLY(DIMETHYLSILOXANE)	Rabbit	No significant irritation

### **Skin Sensitization**

Name	Species	Value
FUSED SILICA	Human	Not sensitizing
	and	
	animal	
SILANE TREATED SILICA	Human	Not sensitizing
	and	
	animal	

## **Respiratory Sensitization**

Name	Species	Value

### Germ Cell Mutagenicity

Name	Route	Value
CRISTOBALITE	In Vitro	Some positive data exist, but the data are not sufficient for classification
CRISTOBALITE	In vivo	Some positive data exist, but the data are not sufficient for classification
FUSED SILICA	In Vitro	Not mutagenic
SILANE TREATED SILICA	In Vitro	Not mutagenic
TRIDYMITE	In Vitro	Some positive data exist, but the data are not sufficient for classification
TRIDYMITE	In vivo	Some positive data exist, but the data are not sufficient for classification
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not sufficient for classification
QUARTZ SILICA	In vivo	Some positive data exist, but the data are not sufficient for classification

### Carcinogenicity

Name	Route	Species	Value
CRISTOBALITE	Inhalation	Human	Carcinogenic
		and	-
		animal	
FUSED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
SILANE TREATED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
TRIDYMITE	Inhalation	Human	Carcinogenic
		and	
		animal	
QUARTZ SILICA	Inhalation	Human	Carcinogenic
		and	-
		animal	

### **Reproductive Toxicity**

### **Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
FUSED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
FUSED SILICA	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
FUSED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
SILANE TREATED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s

### Target Organ(s)

### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure
						Duration

### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CRISTOBALITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
FUSED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
TRIDYMITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

## Aspiration Hazard

Name

Value

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

## **SECTION 12: Ecological information**

### **Ecotoxicological information**

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

### **Chemical fate information**

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

## **SECTION 13: Disposal considerations**

### 13.1. Disposal methods

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

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. If no other disposal options are available, waste product 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

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

Ingredient	C.A.S. No	<u>% by Wt</u>
COBALT TITANATE GREEN SPINEL	68186-85-6	< 0.9
(NICKEL COMPOUNDS)		
COBALT TITANATE GREEN SPINEL	68186-85-6	< 0.9
(Cobalt, inorganic compounds)		

### **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.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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:	07/07/14	Supercedes Date:	01/04/13

## **SECTION 1: Identification**

### 1.1. Product identifier

 $3M^{\text{tm}} ESPE^{\text{tm}} IMPRINT^{\text{tm}} 4 REGULAR BASE$ 

**Product Identification Numbers** LE-F100-1309-8

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

**1.4. Emergency telephone number** 

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

## **SECTION 2: Hazard identification**

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

### 2.1. Hazard classification

Skin Sensitizer: Category 1.

2.2. Label elements Signal word Warning

Symbols Exclamation mark | Pictograms



Hazard Statements May cause an allergic skin reaction.

### **Precautionary Statements**

### **Prevention:**

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

#### **Response:**

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

### **Disposal:**

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

2.3. Hazards not otherwise classified

None.

4% of the mixture consists of ingredients of unknown acute oral toxicity.4% of the mixture consists of ingredients of unknown acute dermal toxicity.

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

Ingredient	C.A.S. No.	% by Wt
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	30 - 50 Trade Secret *
CRISTOBALITE	14464-46-1	20 - 30 Trade Secret *
DIMETHYL METHYL HYDROGEN SILICONE	68037-59-2	10 - 20 Trade Secret *
FLUID		
SILANE TREATED SILICA	67762-90-7	1 - 10 Trade Secret *
FUSED SILICA	60676-86-0	1 - 10 Trade Secret *
POLYALKYLENEOXIDE MODIFIED	27306-78-1	1 - 10 Trade Secret *
HEPTAMETHYLTRISILOXANE		
ALLYLTRIMETHYLSILANE	762-72-1	< 5 Trade Secret *
FLUORINATED POLYETHER	Trade Secret*	1 - 5 Trade Secret *
TRIDYMITE	15468-32-3	< 1 Trade Secret *
QUARTZ SILICA	14808-60-7	< 0.5 Trade Secret *
Oils, mint, Mentha arvensis piperascenssis, var.	68917-18-0	< 0.5 Trade Secret *
piperascens, Labiatae.		

\*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

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

No special protective actions for fire-fighters are anticipated.

## **SECTION 6:** Accidental release measures

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

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

### **6.2.** Environmental precautions

Avoid release to the environment.

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

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

## **SECTION 7: Handling and storage**

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Condition **During Combustion During Combustion During Combustion** 

### 7.1. Precautions for safe handling

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

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

### **8.1.** Control parameters

### **Occupational exposure limits**

Ingredient	C.A.S. No.	Agency	Limit type	<b>Additional Comments</b>
CRISTOBALITE	14464-46-1	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
CRISTOBALITE	14464-46-1	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.)	
TRIDYMITE	15468-32-3	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
SILANE TREATED SILICA	67762-90-7	CMRG	CEIL:5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### **8.2. Exposure controls**

### 8.2.1. Engineering controls

Use in a well-ventilated area.

### 8.2.2. Personal protective equipment (PPE)

### **Eye/face protection**

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face

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

### **Skin/hand protection**

See Section 7.1 for additional information on skin protection.

### **Respiratory protection**

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

## **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:	Smell of mint; white color paste
Odor threshold	No Data Available
рН	Not Applicable
Melting point	Not Applicable
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	Not Applicable
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	1.1 g/cm3 - 1.3 g/cm3
Specific Gravity	1.1 - 1.3 [ <i>Ref Std:</i> WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	Not Applicable
Decomposition temperature	No Data Available
Viscosity	No Data Available
Volatile Organic Compounds	Not Applicable
Percent volatile	Not Applicable
VOC Less H2O & Exempt Solvents	Not Applicable

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

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

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

### **Ingestion:**

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

### **Carcinogenicity:**

Exposures needed to cause the following health effect(s) are not expected during normal, intended use: Contains a chemical or chemicals which can cause cancer.

Ingredient	C.A.S. No.	Class Description	Regulation
CRISTOBALITE	14464-46-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
QUARTZ SILICA	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	14464-46-1	Known human carcinogen	National Toxicology Program Carcinogens

SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	15468-32-3	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	15468-32-3	Known human carcinogen	National Toxicology Program Carcinogens

### **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
VINYL-POLYDIMETHYL SILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYL SILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
CRISTOBALITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
CRISTOBALITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Dermal	Rabbit	LD50 > 2,000 mg/kg
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Inhalation-	Rat	LC50 4.2 mg/l
	Dust/Mist		
	(4 hours)		
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Ingestion	Rat	LD50 > 2,000  mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
SILANE TREATED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
FUSED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
FUSED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist		
	(4 hours)		
FUSED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
POLYALKYLENEOXIDE MODIFIED	Dermal	Rabbit	LD50 > 2,000 mg/kg
HEPTAMETHYLTRISILOXANE			
POLYALKYLENEOXIDE MODIFIED	Inhalation-	Rat	LC50 2 mg/l
HEPTAMETHYLTRISILOXANE	Dust/Mist		
	(4 hours)		
POLYALKYLENEOXIDE MODIFIED	Ingestion	Rat	LD50 > 2,000 mg/kg
HEPTAMETHYLTRISILOXANE		-	
FLUORINATED POLYETHER	Ingestion	Rat	LD50 > 1,000 mg/kg
TRIDYMITE	Dermal		LD50 estimated to be > 5,000 mg/kg
TRIDYMITE	Ingestion		LD50 estimated to be > 5,000 mg/kg
QUARTZ SILICA	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
QUARTZ SILICA	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
Oils, mint, Mentha arvensis piperascenssis, var. piperascens,	Dermal	Rabbit	LD50 > 5,000 mg/kg
Labiatae.		_	
Oils, mint, Mentha arvensis piperascenssis, var. piperascens,	Ingestion	Rat	LD50 1,240 mg/kg
Labiatae.			

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	No significant irritation
CRISTOBALITE		No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
FUSED SILICA	Rabbit	No significant irritation
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Rabbit	No significant irritation
TRIDYMITE		No significant irritation
QUARTZ SILICA		No significant irritation
Oils, mint, Mentha arvensis piperascenssis, var. piperascens, Labiatae.	Rabbit	Mild irritant

### Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	Mild irritant
SILANE TREATED SILICA	Rabbit	No significant irritation

FUSED SILICA	Rabbit	No significant irritation
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Rabbit	Severe irritant
Oils, mint, Mentha arvensis piperascenssis, var. piperascens, Labiatae.	In vitro	Severe irritant
	data	

## Skin Sensitization

Name	Species	Value
SILANE TREATED SILICA	Human	Not sensitizing
	and	
	animal	
FUSED SILICA	Human	Not sensitizing
	and	
	animal	
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Guinea	Not sensitizing
	pig	
Oils, mint, Mentha arvensis piperascenssis, var. piperascens, Labiatae.	Guinea	Sensitizing
	pig	

### **Respiratory Sensitization**

Name Species Value
--------------------

## Germ Cell Mutagenicity

Name	Route	Value
CRISTOBALITE	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
CRISTOBALITE	In vivo	Some positive data exist, but the data are not
		sufficient for classification
SILANE TREATED SILICA	In Vitro	Not mutagenic
FUSED SILICA	In Vitro	Not mutagenic
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	In Vitro	Not mutagenic
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	In vivo	Not mutagenic
TRIDYMITE	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
TRIDYMITE	In vivo	Some positive data exist, but the data are not
		sufficient for classification
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
QUARTZ SILICA	In vivo	Some positive data exist, but the data are not
		sufficient for classification

## Carcinogenicity

Name	Route	Species	Value
CRISTOBALITE	Inhalation	Human	Carcinogenic
		and	
		animal	
SILANE TREATED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
FUSED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
TRIDYMITE	Inhalation	Human	Carcinogenic
		and	
		animal	
QUARTZ SILICA	Inhalation	Human	Carcinogenic
		and	
		animal	

### **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 mg/kg/day	1 generation

SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
FUSED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
FUSED SILICA	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
FUSED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 450 mg/kg/day	premating & during gestation
FLUORINATED POLYETHER	Ingestion	Not toxic to reproduction and/or development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation

### Target Organ(s)

### Specific Target Organ Toxicity - single exposure

	xposure uration			Value		Route		Name
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### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CRISTOBALITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
FUSED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
FLUORINATED POLYETHER	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   immune system   muscles   nervous system   eyes	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
TRIDYMITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

### Aspiration Hazard

Name

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.

Value

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

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

## **SECTION 14: Transport Information**

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

## **SECTION 15: Regulatory information**

### **15.1. US Federal Regulations**

Contact 3M for more information.

### **311/312 Hazard Categories:**

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

### **15.2. State Regulations**

Contact 3M for more information.

### **15.3.** Chemical Inventories

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

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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

Contact 3M for more information.

### **15.4. International Regulations**

Contact 3M for more information.

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

## **SECTION 16: Other information**

### **NFPA Hazard Classification Health: 2 Flammability: 1 Instability: 0 Special Hazards:** None

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

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Issue Date:	07/07/14	Supercedes Date:	01/10/13

## **SECTION 1: Identification**

## 1.1. Product identifier

 $3M^{\rm tm} \, \text{ESPEtm} \, \text{IMPRINT}^{\rm tm} \, 4 \, \text{LIGHT} \, \text{BASE}$ 

**Product Identification Numbers** LE-F100-1309-1

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

**1.4. Emergency telephone number** 

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

## **SECTION 2: Hazard identification**

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

### 2.1. Hazard classification

Skin Sensitizer: Category 1.

2.2. Label elements Signal word Warning

Symbols Exclamation mark | **Pictograms** 



Hazard Statements May cause an allergic skin reaction.

### **Precautionary Statements**

### **Prevention:**

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

### **Response:**

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

### **Disposal:**

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

2.3. Hazards not otherwise classified

None.

3% of the mixture consists of ingredients of unknown acute oral toxicity.3% of the mixture consists of ingredients of unknown acute dermal toxicity.

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

Ingredient	C.A.S. No.	% by Wt
VINYL-POLYDIMETHYL SILOXANE	68083-19-2	30 - 40 Trade Secret *
CRISTOBALITE	14464-46-1	20 - 40 Trade Secret *
DIMETHYL METHYL HYDROGEN SILICONE	68037-59-2	10 - 20 Trade Secret *
FLUID		
FUSED SILICA	60676-86-0	1 - 10 Trade Secret *
POLYETHYLENE GLYCOL, SILOXANE	27306-78-1	1 - 10 Trade Secret *
TERMINATED		
SILANE TREATED SILICA	67762-90-7	1 - 10 Trade Secret *
ALLYLTRIMETHYLSILANE	762-72-1	< 5 Trade Secret *
FLUORINATED POLYETHER	Trade Secret*	< 5 Trade Secret *
TRIDYMITE	15468-32-3	< 2 Trade Secret *
QUARTZ SILICA	14808-60-7	< 0.5 Trade Secret *
CORNMINT OIL	68917-18-0	< 0.5 Trade Secret *

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

## **SECTION 4: First aid measures**

### 4.1. Description of first aid measures

### Inhalation:

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

### **Skin Contact:**

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

### **Eye Contact:**

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

### If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

## **SECTION 5: Fire-fighting measures**

### 5.1. Suitable extinguishing media

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

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

None inherent in this product.

### Hazardous Decomposition or By-Products

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

<u>Condition</u> 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. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

### **6.2.** Environmental precautions

Avoid release to the environment.

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

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

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

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

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

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

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

### **8.1.** Control parameters

### **Occupational exposure limits**

Ingredient	C.A.S. No.	Agency	Limit type	<b>Additional Comments</b>
CRISTOBALITE	14464-46-1	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
CRISTOBALITE	14464-46-1	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
QUARTZ SILICA	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
QUARTZ SILICA	14808-60-7	OSHA	TWA concentration(as total	
			dust):0.3 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.)	
TRIDYMITE	15468-32-3	OSHA	TWA concentration(as total	
			dust):0.15 mg/m3;TWA	
			concentration(respirable):0.05	
			mg/m3(1.2 millions of	
			particles/cu. ft.)	
SILICA, AMORPHOUS	60676-86-0	OSHA	TWA concentration:0.8	
			mg/m3;TWA:20 millions of	
			particles/cu. ft.	
SILANE TREATED SILICA	67762-90-7	CMRG	CEIL:5 mg/m3	
SILICA, AMORPHOUS	67762-90-7	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**

Respiratory protection is not required.

## **SECTION 9: Physical and chemical properties**

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

General Physical Form:	Solid
Specific Physical Form:	Paste
Odor, Color, Grade:	smell of mint white colored paste
Odor threshold	No Data Available
рН	No Data Available
Melting point	Not Applicable
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Classified
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	1.1 g/cm3 - 1.3 g/cm3
Specific Gravity	1.1 - 1.3 [ <i>Ref Std:</i> WATER=1]
Solubility in Water	Negligible
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	Not Applicable
Autoignition temperature	No Data Available
Decomposition temperature	No Data Available
Viscosity	No Data Available
Volatile Organic Compounds	Not Applicable
Percent volatile	Not Applicable
VOC Less H2O & Exempt Solvents	Not Applicable

## **SECTION 10: Stability and reactivity**

### 10.1. Reactivity

This material 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** Amines Strong acids Strong bases Strong oxidizing agents

10.6. Hazardous decomposition products <u>Substance</u> 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:

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

### Ingestion:

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

### **Carcinogenicity:**

Exposures needed to cause the following health effect(s) are not expected during normal, intended use: Contains a chemical or chemicals which can cause cancer.

	[		-
Ingredient	<u>C.A.S. No.</u>	Class Description	Regulation

CRISTOBALITE	14464-46-1	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
QUARTZ SILICA	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	14464-46-1	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	14808-60-7	Known human carcinogen	National Toxicology Program Carcinogens
SILICA, CRYS AIRRESP	15468-32-3	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
SILICA, CRYS AIRRESP	15468-32-3	Known human carcinogen	National Toxicology Program Carcinogens

### **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
VINYL-POLYDIMETHYL SILOXANE	Dermal	Rabbit	LD50 > 15,440 mg/kg
VINYL-POLYDIMETHYL SILOXANE	Ingestion	Rat	LD50 > 15,440 mg/kg
CRISTOBALITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
CRISTOBALITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Dermal	Rabbit	LD50 > 2,000 mg/kg
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Inhalation- Dust/Mist	Rat	LC50 4.2 mg/l
	(4 hours)	-	
DIMETHYL METHYL HYDROGEN SILICONE FLUID	Ingestion	Rat	LD50 > 2,000 mg/kg
FUSED SILICA	Dermal	Rabbit	LD50 > 5,000 mg/kg
FUSED SILICA	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
FUSED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
SILANE TREATED SILICA	Dermal	Rabbit	LD50 > 5,000  mg/kg
SILANE TREATED SILICA	Inhalation-	Rat	LC50 > 0.691 mg/l
	Dust/Mist	itut	1000 × 0.091 mg/1
	(4 hours)		
SILANE TREATED SILICA	Ingestion	Rat	LD50 > 5,110 mg/kg
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Dermal	Rabbit	LD50 > 2,000  mg/kg
POLYETHYLENE GLYCOL. SILOXANE TERMINATED	Inhalation-	Rat	LC50 2 mg/l
	Dust/Mist		
	(4 hours)		
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Ingestion	Rat	LD50 > 2,000  mg/kg
FLUORINATED POLYETHER	Ingestion	Rat	LD50 > 1,000 mg/kg
TRIDYMITE	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
TRIDYMITE	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
QUARTZ SILICA	Dermal		LD50 estimated to be $> 5,000 \text{ mg/kg}$
QUARTZ SILICA	Ingestion		LD50 estimated to be $> 5,000 \text{ mg/kg}$
CORNMINT OIL	Dermal	Rabbit	LD50 > 5,000 mg/kg
CORNMINT OIL	Ingestion	Rat	LD50 1,240 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	No significant irritation
CRISTOBALITE		No significant irritation
FUSED SILICA	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Rabbit	No significant irritation
TRIDYMITE		No significant irritation
QUARTZ SILICA		No significant irritation
CORNMINT OIL	Rabbit	Mild irritant

### Serious Eye Damage/Irritation

Name	Species	Value
VINYL-POLYDIMETHYL SILOXANE	Rabbit	Mild irritant
FUSED SILICA	Rabbit	No significant irritation
SILANE TREATED SILICA	Rabbit	No significant irritation

POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Rabbit	Severe irritant
CORNMINT OIL	In vitro	Severe irritant
	data	

### **Skin Sensitization**

Name	Species	Value
FUSED SILICA	Human	Not sensitizing
	and	
	animal	
SILANE TREATED SILICA	Human	Not sensitizing
	and	
	animal	
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Guinea	Not sensitizing
	pig	
CORNMINT OIL	Guinea	Sensitizing
	pig	

Respiratory Sensitization Species Value

### Germ Cell Mutagenicity

Name	Route	Value		
CRISTOBALITE	In Vitro	Some positive data exist, but the data are not sufficient for classification		
CRISTOBALITE	In vivo	Some positive data exist, but the data are not sufficient for classification		
FUSED SILICA	In Vitro	Not mutagenic		
SILANE TREATED SILICA	In Vitro	Not mutagenic		
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	In Vitro	Not mutagenic		
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	In vivo	Not mutagenic		
TRIDYMITE	In Vitro	Some positive data exist, but the data are not sufficient for classification		
TRIDYMITE	In vivo	Some positive data exist, but the data are not sufficient for classification		
QUARTZ SILICA	In Vitro	Some positive data exist, but the data are not sufficient for classification		
QUARTZ SILICA	In vivo	Some positive data exist, but the data are not sufficient for classification		

## Carcinogenicity

Name	Route	Species	Value
CRISTOBALITE	Inhalation	Human	Carcinogenic
		and	
		animal	
FUSED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
SILANE TREATED SILICA	Not	Mouse	Some positive data exist, but the data are not
	Specified		sufficient for classification
TRIDYMITE	Inhalation	Human	Carcinogenic
		and	
		animal	
QUARTZ SILICA	Inhalation	Human	Carcinogenic
		and	
		animal	

## **Reproductive Toxicity**

## **Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test Result	Exposure Duration
FUSED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
FUSED SILICA	Inhalation	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
FUSED SILICA	Ingestion	Not toxic to development	Rat	NOAEL	during

				1,350 mg/kg/day	organogenesi s
SILANE TREATED SILICA	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
SILANE TREATED SILICA	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
POLYETHYLENE GLYCOL, SILOXANE TERMINATED	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 450 mg/kg/day	premating & during gestation
FLUORINATED POLYETHER	Ingestion	Not toxic to reproduction and/or development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not toxic to female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
FLUORINATED POLYETHER	Ingestion	Not toxic to male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation

### Target Organ(s)

### **Specific Target Organ Toxicity - single exposure**

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

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
CRISTOBALITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
FUSED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
SILANE TREATED SILICA	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
FLUORINATED POLYETHER	Ingestion	auditory system   heart   endocrine system   hematopoietic system   liver   immune system   muscles   nervous system   eyes	All data are negative	Rat	NOAEL 1,000 mg/kg/day	28 days
TRIDYMITE	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
QUARTZ SILICA	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

## **Aspiration Hazard**

Name

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.

Value

## **SECTION 12: Ecological information**

**Ecotoxicological information** 

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

### **Chemical fate information**

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

## **SECTION 13: Disposal considerations**

### 13.1. Disposal methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

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

## **SECTION 14: Transport Information**

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

## **SECTION 15: Regulatory information**

### **15.1. US Federal Regulations**

Contact 3M for more information.

### **311/312 Hazard Categories:**

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

### **15.2. State Regulations**

Contact 3M for more information.

### **15.3.** Chemical Inventories

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

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

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

Contact 3M for more information.

### **15.4. International Regulations**

Contact 3M for more information.

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

## **SECTION 16: Other information**

### NFPA Hazard Classification Health: 2 Flammability: 1 Instability: 0 Special Hazards: None

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

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