

SAFETY DATA SHEETS

This SDS packet was issued with item:

075028410

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

075028360 075028378 075028386 075028394 075028402 075028428



Material Safety Data Sheet

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PRODUCT NAME: 3M™ ESPE™ IMPRINT™ 4 HEAVY REFILL
MANUFACTURER: 3M
DIVISION: 3M ESPE Dental Products

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

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

Issue Date: 01/28/13
Supersedes Date: Initial Issue

Document Group: 31-6693-1

ID Number(s):

70-2011-4147-3

This product is a kit or a multipart product which consists of multiple, independently packaged components. An MSDS for each of these components is included. Please do not separate the component MSDSs from this cover page. The document numbers of the MSDSs for components of this product are:

31-4838-4, 31-4841-8

No revision information is available.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ ESPE™ IMPRINT™ 4 HEAVY BASE
MANUFACTURER: 3M
DIVISION: 3M ESPE Dental Products

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

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

Issue Date: 01/09/13
Supersedes Date: 01/03/13

Document Group: 31-4838-4

Product Use:

Intended Use: Dental Product
 Limitations on Use: For us only by dental professionals.
 Specific Use: Impression Material

SECTION 2: INGREDIENTS

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

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: smell of mint white colored paste

General Physical Form: Solid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

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

Skin Contact:

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

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

Inhalation:

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

Ingestion:

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

Target Organ Effects:

This product contains Cristobalite (CASRN 14464-46-1). Cancer of the lungs and silicosis has been associated with cristobalite. No exposure to cristobalite is anticipated during normal intended handling of the paste or cured material and therefore, the health effects associated with cristobalite are not expected during the foreseeable use of this product.

This product contains quartz silica. Quartz silica is a form of crystalline silica. Occupational exposure to inhaled crystalline silica has been associated with silicosis and lung cancer. No exposure to crystalline silica is expected during the normal handling and use of this product.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: No need for first aid is anticipated.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

Autoignition temperature

No Data Available

Flash Point

No flash point

Flammable Limits(LEL)

Not Applicable

Flammable Limits(UEL)

Not Applicable

5.2 EXTINGUISHING MEDIA

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

5.3 PROTECTION OF FIRE FIGHTERS

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

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air.

6.2. Environmental precautions

Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Collect as much of the spilled material as possible. Clean up residue.

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

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not ingest. Wash hands after handling and before eating. Avoid eye contact with dust or airborne particles. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE

Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use in an enclosed process area is recommended. Not applicable. Use in a well-ventilated area.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

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

8.2.2 Skin Protection

Avoid skin contact. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

8.2.3 Respiratory Protection

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

8.2.4 Prevention of Swallowing

Not applicable. Do not ingest. Wash hands after handling and before eating.

8.3 EXPOSURE GUIDELINES

| <u>Ingredient</u> | <u>Authority</u> | <u>Type</u> | <u>Limit</u> | <u>Additional Information</u> |
|-----------------------|------------------|----------------------------------|----------------------------------|-------------------------------|
| CRISTOBALITE | ACGIH | TWA, respirable fraction | 0.025 mg/m3 | |
| CRISTOBALITE | OSHA | TWA concentration, respirable | 0.05 mg/m3 | |
| CRISTOBALITE | OSHA | TWA concentration, as total dust | 0.15 mg/m3 | |
| SILANE TREATED SILICA | CMRG | CEIL | 5 mg/m3 | |
| QUARTZ SILICA | ACGIH | TWA, respirable fraction | 0.025 mg/m3 | |
| QUARTZ SILICA | OSHA | TWA concentration, respirable | 0.1 mg/m3 | |
| QUARTZ SILICA | OSHA | TWA concentration, as total dust | 0.3 mg/m3 | |
| SILICA, AMORPHOUS | OSHA | TWA concentration | 0.8 mg/m3 | |
| SILICA, AMORPHOUS | OSHA | TWA | 20 millions of particles/cu. ft. | |
| TRIDYMITE | OSHA | TWA concentration, respirable | 0.05 mg/m3 | |
| TRIDYMITE | OSHA | TWA concentration, as total dust | 0.15 mg/m3 | |

SOURCE OF EXPOSURE LIMIT DATA:

ACGIH: American Conference of Governmental Industrial Hygienists

CMRG: Chemical Manufacturer Recommended Guideline

OSHA: Occupational Safety and Health Administration

AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|-----------------------------------|
| Specific Physical Form: | Paste |
| Odor, Color, Grade: | smell of mint white colored paste |
| General Physical Form: | Solid |
| Autoignition temperature | <i>No Data Available</i> |
| Flash Point | No flash point |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Boiling Point | <i>Not Applicable</i> |

| | |
|---|---|
| Density | 1.3 g/cm ³ - 1.5 g/cm ³ |
| Vapor Density | No Data Available |
| Vapor Pressure | No Data Available |
| Specific Gravity | 1.3 - 1.5 [Ref Std: WATER=1] |
| pH | No Data Available |
| Melting point | Not Applicable |
| Solubility in Water | Negligible |
| Evaporation rate | No Data Available |
| Volatile Organic Compounds | Not Applicable |
| Kow - Oct/Water partition coef | Not Applicable |
| Percent volatile | Not Applicable |
| VOC Less H ₂ O & Exempt Solvents | Not Applicable |
| Viscosity | No Data Available |

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

None known

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

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

SECTION 11: TOXICOLOGICAL INFORMATION

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

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of waste product in a sanitary landfill. As a disposal alternative, incinerate in an industrial or commercial facility.

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14: TRANSPORT INFORMATION

LE-F100-1307-2

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

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

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

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

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

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

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

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

Revision Changes:

Section 7: Handling information was modified.

Section 8: Engineering controls information was modified.

Section 8: Skin protection phrase was modified.

Section 8: Prevention of swallowing information was modified.

Section 2: Ingredient table was modified.

Section 8: Hand protection information was modified.

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ ESPE™ IMPRINT™ 4 HEAVY CATALYST
MANUFACTURER: 3M
DIVISION: 3M ESPE Dental Products

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

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

Issue Date: 01/03/13
Supersedes Date: Initial Issue

Document Group: 31-4841-8

Product Use:

Intended Use: Dental Product
Limitations on Use: For us only by dental professionals
Specific Use: Impression Material

SECTION 2: INGREDIENTS

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

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: slight characteristic odor, blue colored paste

General Physical Form: Solid

Immediate health, physical, and environmental hazards: This document has been prepared in accordance with the U.S. OSHA

Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

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

Skin Contact:

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

Inhalation:

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

Ingestion:

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

Target Organ Effects:

This product contains Cristobalite (CASRN 14464-46-1). Cancer of the lungs and silicosis has been associated with cristobalite. No exposure to cristobalite is anticipated during normal intended handling of the paste or cured material and therefore, the health effects associated with cristobalite are not expected during the foreseeable use of this product.

This product contains quartz silica. Quartz silica is a form of crystalline silica. Occupational exposure to inhaled crystalline silica has been associated with silicosis and lung cancer. No exposure to crystalline silica is expected during the normal handling and use of this product.

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

Inhalation: No need for first aid is anticipated.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

| | |
|---------------------------------|--------------------------|
| Autoignition temperature | <i>No Data Available</i> |
| Flash Point | <i>No flash point</i> |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |

5.2 EXTINGUISHING MEDIA

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

5.3 PROTECTION OF FIRE FIGHTERS

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

Unusual Fire and Explosion Hazards: Closed containers exposed to heat from fire may build pressure and explode.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air.

6.2. Environmental precautions

Place in a closed container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Clean-up methods

Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and MSDS.

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

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Avoid prolonged or repeated skin contact. Do not ingest. Wash hands after handling and before eating. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment.

7.2 STORAGE

Store away from heat. Store out of direct sunlight.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Not applicable. Use in a well-ventilated area.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

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

8.2.2 Skin Protection

Avoid prolonged or repeated skin contact. Gloves not normally required.

8.2.3 Respiratory Protection

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

8.2.4 Prevention of Swallowing

Do not ingest. Wash hands after handling and before eating.

8.3 EXPOSURE GUIDELINES

| <u>Ingredient</u> | <u>Authority</u> | <u>Type</u> | <u>Limit</u> | <u>Additional Information</u> |
|-----------------------|------------------|----------------------------------|----------------------------------|-------------------------------|
| CRISTOBALITE | ACGIH | TWA, respirable fraction | 0.025 mg/m3 | |
| CRISTOBALITE | OSHA | TWA concentration, respirable | 0.05 mg/m3 | |
| CRISTOBALITE | OSHA | TWA concentration, as total dust | 0.15 mg/m3 | |
| SILANE TREATED SILICA | CMRG | CEIL | 5 mg/m3 | |
| QUARTZ SILICA | ACGIH | TWA, respirable fraction | 0.025 mg/m3 | |
| QUARTZ SILICA | OSHA | TWA concentration, respirable | 0.1 mg/m3 | |
| QUARTZ SILICA | OSHA | TWA concentration, as total dust | 0.3 mg/m3 | |
| SILICA, AMORPHOUS | OSHA | TWA concentration | 0.8 mg/m3 | |
| SILICA, AMORPHOUS | OSHA | TWA | 20 millions of particles/cu. ft. | |
| TRIDYMITE | OSHA | TWA concentration, respirable | 0.05 mg/m3 | |
| TRIDYMITE | OSHA | TWA concentration, as total dust | 0.15 mg/m3 | |

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration
- AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|--|
| Specific Physical Form: | Paste |
| Odor, Color, Grade: | slight characteristic odor, blue colored paste |
| General Physical Form: | Solid |
| Autoignition temperature | <i>No Data Available</i> |
| Flash Point | No flash point |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Boiling Point | <i>Not Applicable</i> |
| Density | 1.4 g/cm3 - 1.6 g/cm3 |
| Vapor Density | <i>No Data Available</i> |
| Vapor Pressure | <i>No Data Available</i> |
| Specific Gravity | 1.4 - 1.6 [<i>Ref Std: WATER=1</i>] |

| | |
|--------------------------------|-------------------|
| pH | No Data Available |
| Melting point | Not Applicable |
| Solubility in Water | Negligible |
| Evaporation rate | No Data Available |
| Volatile Organic Compounds | Not Applicable |
| Kow - Oct/Water partition coef | Not Applicable |
| Percent volatile | Not Applicable |
| VOC Less H2O & Exempt Solvents | Not Applicable |
| Viscosity | No Data Available |

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

None known

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

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

SECTION 11: TOXICOLOGICAL INFORMATION

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

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method: Dispose of waste product in a sanitary landfill. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator in the presence of a combustible material.
As a disposal alternative, incinerate in an industrial or commercial facility.

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14: TRANSPORT INFORMATION

LE-F100-1307-3

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

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

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

STATE REGULATIONS

Contact 3M for more information.

CHEMICAL INVENTORIES

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

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

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health: 1 Flammability: 1 Reactivity: 0 Special Hazards: None

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

No revision information is available.

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Safety Data Sheet

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| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 31-6693-1 | Version Number: | 1.02 |
| Issue Date: | 04/15/15 | Supersedes Date: | 05/20/14 |

Product identifier

3M™ ESPE™ IMPRINT™ 4 HEAVY REFILL

ID Number(s):

70-2011-4147-3

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, 31-4838-4

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| Document Group: | 31-4841-8 | Version Number: | 3.00 |
| Issue Date: | 02/25/16 | Supersedes Date: | 10/09/14 |

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 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 use only by dental professionals

1.3. Supplier's details

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

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

2.1. Hazard classification

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

2.2. Label elements

Signal word

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

2.3. Hazards not otherwise classified

None.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|----------------------------|------------|------------------------|
| CRISTOBALITE | 14464-46-1 | 30 - 40 Trade Secret * |
| VINYL-POLYDIMETHYLSILOXANE | 68083-19-2 | 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

Condition

Carbon monoxide
 Carbon dioxide
 Irritant Vapors or Gases

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 | Additional Comments |
|---------------|------------|--------|---|-----------------------------|
| CRISTOBALITE | 14464-46-1 | ACGIH | TWA(respirable fraction):0.025 mg/m3 | A2: Suspected human 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 fraction):0.025 mg/m3 | A2: Suspected human 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: | slight characteristic odor, blue colored paste |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>No Data Available</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | <i>Not Applicable</i> |
| Flash Point | Flash point > 93 °C (200 °F) |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Classified |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapor Pressure | <i>No Data Available</i> |
| Vapor Density | <i>No Data Available</i> |
| Density | 1.4 g/cm3 - 1.6 g/cm3 |

| | |
|---|------------------------------|
| Specific Gravity | 1.4 - 1.6 [Ref Std: 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> | <u>Condition</u> |
|------------------|------------------|
| None known. | |

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

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

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:

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

Skin Contact:

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

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, CRYST AIRRESP | 14464-46-1 | Known human carcinogen | National Toxicology Program Carcinogens |
| SILICA, CRYST AIRRESP | 14808-60-7 | Known human carcinogen | National Toxicology Program Carcinogens |
| SILICA, CRYST AIRRESP | 15468-32-3 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| SILICA, CRYST 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 mg/kg |
| CRISTOBALITE | Ingestion | | LD50 estimated to be > 5,000 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-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| 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 mg/kg |
| TRIDYMITE | Ingestion | | LD50 estimated to be > 5,000 mg/kg |
| QUARTZ SILICA | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| QUARTZ SILICA | Ingestion | | LD50 estimated to be > 5,000 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|----------------------------|------------------------|---------------------------|
| VINYL-POLYDIMETHYLSILOXANE | Rabbit | No significant irritation |
| CRISTOBALITE | Professional judgement | No significant irritation |
| FUSED SILICA | Rabbit | No significant irritation |
| SILANE TREATED SILICA | Rabbit | No significant irritation |
| POLY(DIMETHYLSILOXANE) | Rabbit | No significant irritation |
| TRIDYMITE | Professional judgement | No significant irritation |
| QUARTZ SILICA | Professional judgement | 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 and animal | Not sensitizing |
| SILANE TREATED SILICA | Human and animal | Not sensitizing |

Respiratory Sensitization

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

Germ Cell Mutagenicity

| Name | Route | Value |
|-----------------------|----------|--|
| 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 and | Carcinogenic |

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

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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 |
| 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

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

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

SECTION 12: Ecological information

Ecotoxicological information

Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material

and/or its components.

Chemical fate information

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

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Incinerate in a permitted waste incineration facility. 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.

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 31-4841-8 | Version Number: | 3.00 |
| Issue Date: | 02/25/16 | Supersedes Date: | 10/09/14 |

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3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 31-4838-4 | Version Number: | 3.00 |
| Issue Date: | 02/25/16 | Supersedes Date: | 12/16/14 |

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 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

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

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

2.1. Hazard classification

Skin Sensitizer: Category 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 FLUID | 68037-59-2 | 1 - 10 Trade Secret * |
| FUSED SILICA | 60676-86-0 | 1 - 10 Trade Secret * |
| SILANE TREATED SILICA | 67762-90-7 | 1 - 10 Trade Secret * |
| ALLYLTRIMETHYLSILANE | 762-72-1 | < 5 Trade Secret * |
| POLY(DIMETHYLSILOXANE) | 63148-62-9 | < 5 Trade Secret * |
| POLYETHYLENE GLYCOL, SILOXANE TERMINATED | 27306-78-1 | < 5.0 Trade Secret * |
| TRIDYMITE | 15468-32-3 | < 5 Trade Secret * |
| 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

Substance

Carbon monoxide
Carbon dioxide
Irritant Vapors or Gases

Condition

During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ventilate the area with fresh air. 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 | Additional Comments |
|-----------------------|------------|--------|---|-----------------------------|
| CRISTOBALITE | 14464-46-1 | ACGIH | TWA(respirable fraction):0.025 mg/m3 | A2: Suspected human 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 fraction):0.025 mg/m3 | A2: Suspected human 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 | <i>No Data Available</i> |
| pH | <i>No Data Available</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | <i>Not Applicable</i> |
| Flash Point | No flash point |
| Evaporation rate | <i>No Data Available</i> |
| Flammability (solid, gas) | Not Classified |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapor Pressure | <i>No Data Available</i> |
| Vapor Density | <i>No Data Available</i> |
| Density | 1.3 g/cm ³ - 1.5 g/cm ³ |
| Specific Gravity | 1.3 - 1.5 [<i>Ref Std: WATER=1</i>] |
| Solubility in Water | Negligible |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>Not Applicable</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | <i>No Data Available</i> |
| Volatile Organic Compounds | <i>Not Applicable</i> |
| Percent volatile | <i>Not Applicable</i> |
| VOC Less H₂O & Exempt Solvents | <i>Not Applicable</i> |

SECTION 10: Stability and reactivity**10.1. Reactivity**

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Strong acids
Strong bases
Strong oxidizing agents
Amines

10.6. Hazardous decomposition products

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

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

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

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

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

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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

Inhalation:

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

Skin Contact:

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

Eye Contact:

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

Ingestion:

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

Additional Health Effects:

Carcinogenicity:

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

| Ingredient | CAS No. | Class Description | Regulation |
|-------------------------|------------|--------------------------------|---|
| SILICA, CRYSTAL AIRRESP | 14464-46-1 | Known human carcinogen | National Toxicology Program Carcinogens |
| SILICA, CRYSTAL AIRRESP | 14808-60-7 | Known human carcinogen | National Toxicology Program Carcinogens |
| SILICA, CRYSTAL AIRRESP | 15468-32-3 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| SILICA, CRYSTAL 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 mg/kg |
| CRISTOBALITE | Ingestion | | LD50 estimated to be > 5,000 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 | Ingestion | Rat | LD50 > 2,000 mg/kg |
| SILANE TREATED SILICA | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| SILANE TREATED SILICA | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| SILANE TREATED SILICA | Ingestion | Rat | LD50 > 5,110 mg/kg |
| 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 | Professional judgment | LD50 estimated to be 2,000 - 5,000 mg/kg |
| ALLYLTRIMETHYLSILANE | Ingestion | similar compounds | LD50 estimated to be 2,000 - 5,000 mg/kg |
| 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 mg/kg |
| TRIDYMITE | Ingestion | | LD50 estimated to be > 5,000 mg/kg |
| QUARTZ SILICA | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| QUARTZ SILICA | Ingestion | | LD50 estimated to be > 5,000 mg/kg |
| CORN MINT OIL | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| CORN MINT OIL | Ingestion | Rat | LD50 1,240 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|-----------------------------|-----------------------|---------------------------|
| CRISTOBALITE | Professional judgment | 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 | Professional judgement | No significant irritation |
| QUARTZ SILICA | Professional judgement | 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 data | Severe irritant |

Skin Sensitization

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

Respiratory Sensitization

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

Germ Cell Mutagenicity

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

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test Result | Exposure Duration |
|--|------------|---|---------|-----------------------|--------------------------------|
| SILANE TREATED SILICA | Ingestion | Not toxic to female reproduction | Rat | NOAEL 509 mg/kg/day | 1 generation |
| SILANE TREATED SILICA | Ingestion | Not toxic to male reproduction | Rat | NOAEL 497 mg/kg/day | 1 generation |
| SILANE TREATED SILICA | Ingestion | Not toxic to development | Rat | NOAEL 1,350 mg/kg/day | during organogenesis |
| 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 organogenesis |
| 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 | prematuring & 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 <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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