

SAFETY DATA SHEETS

This SDS packet was issued with item:

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Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 32-4976-0 | Version Number: | 2.00 |
| Issue Date: | 02/07/17 | Supersedes Date: | 04/15/15 |

Product identifier

3M™ ESPE™ IMPRINT™ 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: | Oral Care Solutions Division |

| | |
|-------------------|---|
| 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:

31-4838-4, 31-4841-8, 31-4872-3, 31-4879-8, 31-4882-2, 31-4863-2, 35-4552-2

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Safety Data Sheet

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| Document Group: | 35-4552-2 | Version Number: | 1.04 |
| Issue Date: | 01/04/17 | Supersedes Date: | 04/22/16 |

SECTION 1: Identification

1.1. Product identifier

3M™ VPS Tray Adhesive - New Formulation

Product Identification Numbers

LE-F100-1876-8, 70-2011-4438-6

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 |
| 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

Flammable Liquid: Category 2.

Specific Target Organ Toxicity (single exposure): 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.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Keep container tightly closed.

Use explosion-proof electrical/ventilating/lighting equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray.

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 | 40 - 60 Trade Secret * |
| HYDROXY-TERMINATED DIMETHYLSILOXANE, REACTION PRODUCTS WITH CHLOROTRIMETHYLSILANE, HYDROCHLORIC ACID, ISOPROPYL ALCOHOL, AND SODIUM SILICATE | 68440-70-0 | 40 - 60 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 prolonged or repeated skin contact. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Do not get in eyes.

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 | OSHA | TWA:1400 mg/m3(400 ppm) | |
| ETHYL ACETATE | 141-78-6 | ACGIH | TWA:400 ppm | |

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: | Red liquid with characteristic organic solvent odor. |
| Odor threshold | <i>No Data Available</i> |
| pH | <i>No Data Available</i> |
| Melting point | <i>No Data Available</i> |
| Boiling Point | 169 °F |
| Flash Point | 25 °F [<i>Test Method: Closed Cup</i>] |
| Evaporation rate | <i>No Data Available</i> |
| 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: AIR=1</i>] |
| Density | Approximately 0.9 g/cm ³ |
| Specific Gravity | > 0.9 [<i>Ref Std: WATER=1</i>] |
| Solubility in Water | Nil |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | Approximately 0.25 Pa-s |
| Percent volatile | <i>No Data Available</i> |

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Sparks and/or flames
Heat

10.5. Incompatible materials

Strong acids
Strong oxidizing agents

No Data Available

10.6. Hazardous decomposition products

| <u>Substance</u> | <u>Condition</u> |
|------------------|-----------------------------|
| Carbon monoxide | Oxidation, heat or reaction |
| Carbon dioxide | 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.

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:

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.

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 | 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 |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|---------------|---------|--------------------|
| ETHYL ACETATE | Rabbit | Minimal irritation |

Serious Eye Damage/Irritation

| Name | Species | Value |
|---------------|---------|---------------|
| ETHYL ACETATE | Rabbit | Mild irritant |

Skin Sensitization

| Name | Species | Value |
|---------------|------------|-----------------|
| ETHYL ACETATE | Guinea pig | 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 |
|---------------|----------|---------------|
| ETHYL ACETATE | In Vitro | Not mutagenic |
| ETHYL ACETATE | In vivo | Not mutagenic |

Carcinogenicity

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

Reproductive Toxicity

Reproductive and/or Developmental Effects

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|---------------|------------|-----------------------------------|--|---------|---------------------|-------------------|
| ETHYL ACETATE | Inhalation | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |
| ETHYL ACETATE | Inhalation | respiratory irritation | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | |
| ETHYL ACETATE | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Human | NOAEL Not available | |

Specific Target Organ Toxicity - repeated exposure

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

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.

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.

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 35-4552-2 | Version Number: | 1.04 |
| Issue Date: | 01/04/17 | Supersedes Date: | 04/22/16 |

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 31-4863-2 | Version Number: | 3.00 |
| Issue Date: | 02/25/16 | Supersedes Date: | 07/07/14 |

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 4 LIGHT 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

| | |
|----------------------|---|
| 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.

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 |
|--|---------------|------------------------|
| CRISTOBALITE | 14464-46-1 | 20 - 40 Trade Secret * |
| VINYL-POLYDIMETHYL SILOXANE | 68083-19-2 | 30 - 40 Trade Secret * |
| DIMETHYL METHYL HYDROGEN SILICONE FLUID | 68037-59-2 | 10 - 20 Trade Secret * |
| FUSED SILICA | 60676-86-0 | 1 - 10 Trade Secret * |
| POLYETHYLENE GLYCOL, SILOXANE TERMINATED | 27306-78-1 | 1 - 10 Trade Secret * |
| 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 * |
| CORNMINT OIL | 68917-18-0 | < 0.5 Trade Secret * |
| QUARTZ SILICA | 14808-60-7 | < 0.5 Trade Secret * |

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

SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation:

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

Skin Contact:

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

Eye Contact:

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

If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Material will not burn.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

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

5.3. Special protective actions for fire-fighters

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

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**

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/m ³ | A2: Suspected human carcin. |
| CRISTOBALITE | 14464-46-1 | OSHA | TWA concentration(as total dust):0.15 mg/m ³ ;TWA concentration(respirable):0.05 mg/m ³ (1.2 millions of particles/cu. ft.) | |
| QUARTZ SILICA | 14808-60-7 | ACGIH | TWA(respirable fraction):0.025 mg/m ³ | A2: Suspected human carcin. |
| QUARTZ SILICA | 14808-60-7 | OSHA | TWA concentration(as total dust):0.3 mg/m ³ ;TWA concentration(respirable):0.1 mg/m ³ (2.4 millions of particles/cu. ft.) | |
| TRIDYMITE | 15468-32-3 | OSHA | TWA concentration(as total dust):0.15 mg/m ³ ;TWA concentration(respirable):0.05 mg/m ³ (1.2 millions of particles/cu. ft.) | |
| SILICA, AMORPHOUS | 60676-86-0 | OSHA | TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft. | |
| SILANE TREATED SILICA | 67762-90-7 | CMRG | CEIL:5 mg/m ³ | |
| SILICA, AMORPHOUS | 67762-90-7 | OSHA | TWA concentration:0.8 mg/m ³ ;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 | <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 | 1.1 g/cm ³ - 1.3 g/cm ³ |
| Specific Gravity | 1.1 - 1.3 [<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

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. 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.

| <u>Ingredient</u> | <u>CAS No.</u> | <u>Class Description</u> | <u>Regulation</u> |
|-----------------------|----------------|--------------------------------|---|
| 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

| <u>Name</u> | <u>Route</u> | <u>Species</u> | <u>Value</u> |
|--|--------------------------------|------------------------|---|
| 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 mg/kg |
| CRISTOBALITE | Ingestion | | LD50 estimated to be > 5,000 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 |
| 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 |
| 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 |
| ALLYLTRIMETHYLSILANE | Dermal | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg |
| ALLYLTRIMETHYLSILANE | Ingestion | similar compounds | LD50 estimated to be 2,000 - 5,000 mg/kg |
| FLUORINATED POLYETHER | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| 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 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 |
|--|------------------------|---------------------------|
| VINYL-POLYDIMETHYL SILOXANE | Rabbit | No significant irritation |
| CRISTOBALITE | Professional judgement | 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 | 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 |
| FUSED SILICA | Rabbit | No significant irritation |
| SILANE TREATED SILICA | Rabbit | No significant irritation |
| POLYETHYLENE GLYCOL, SILOXANE TERMINATED | Rabbit | Severe irritant |
| CORNMINT OIL | In vitro data | Severe irritant |

Skin Sensitization

| Name | Species | Value |
|--|------------------|-----------------|
| FUSED SILICA | Human and animal | Not sensitizing |
| SILANE TREATED 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 |
| 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 and animal | Carcinogenic |
| 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 |
| 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 |
| FLUORINATED POLYETHER | Ingestion | Not toxic to reproduction and/or development | Rat | NOAEL 1,000 mg/kg/day | prematuring into lactation |
| FLUORINATED POLYETHER | Ingestion | Not toxic to female reproduction | Rat | NOAEL 1,000 mg/kg/day | prematuring into lactation |
| FLUORINATED POLYETHER | Ingestion | Not toxic to male reproduction | Rat | NOAEL 1,000 mg/kg/day | prematuring into lactation |

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 |
| FLUORINATED POLYETHER | Ingestion | auditory system heart endocrine | All data are negative | Rat | NOAEL 1,000 | 28 days |

| | | | | | | |
|---------------|------------|---|--|-------|---------------------|-----------------------|
| | | system hematopoietic system liver immune system muscles nervous system eyes | | | mg/kg/day | |
| 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. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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: 0 Instability: 0 Special Hazards: None

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

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 31-4863-2 | Version Number: | 3.00 |
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Safety Data Sheet

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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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Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 31-4872-3 | Version Number: | 3.00 |
| Issue Date: | 02/25/16 | Supersedes Date: | 07/07/14 |

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™ IMPRINT™ 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 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 |
|----------------------------|------------|------------------------|
| 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-ProductsSubstanceCondition

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. 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

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.) | |
| 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 | <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 | 1.2 g/cm ³ - 1.4 g/cm ³ |
| Specific Gravity | 1.2 - 1.4 [Ref Std: WATER=1] |
| 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

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, CRYSTALLINE | 14464-46-1 | Known human carcinogen | National Toxicology Program Carcinogens |
| SILICA, CRYSTALLINE | 14808-60-7 | Known human carcinogen | National Toxicology Program Carcinogens |
| SILICA, CRYSTALLINE | 15468-32-3 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| SILICA, CRYSTALLINE | 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 |
| TRIDYMITE | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| TRIDYMITE | Ingestion | | LD50 estimated to be > 5,000 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 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

| Name | Species | Value |
|----------------------------|------------------------|---------------------------|
| VINYL-POLYDIMETHYLSILOXANE | Rabbit | No significant irritation |
| CRISTOBALITE | Professional judgement | No significant irritation |

| | | |
|------------------------|------------------------|---------------------------|
| | nt | |
| FUSED SILICA | Rabbit | No significant irritation |
| SILANE TREATED SILICA | Rabbit | No significant irritation |
| TRIDYMITE | Professional judgement | No significant irritation |
| POLY(DIMETHYLSILOXANE) | Rabbit | 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 animal | Carcinogenic |
| 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 | 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 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.

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

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.

Document Group: 31-4872-3 **Version Number:** 3.00
Issue Date: 02/25/16 **Supersedes Date:** 07/07/14

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Safety Data Sheet

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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 use only by dental professionals.

1.3. Supplier's details

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

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

2.1. Hazard classification

Skin Sensitizer: Category 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 judgment | No significant irritation |
| QUARTZ SILICA | Professional judgment | 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 |
| TRIDYMITTE | 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 |
| TRIDYMITTE | 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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| Issue Date: | 02/25/16 | Supersedes Date: | 12/16/14 |

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 31-4882-2 | Version Number: | 3.00 |
| Issue Date: | 02/25/16 | Supersedes Date: | 10/10/14 |

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™IMPRINT™ 4 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

| | |
|----------------------|---|
| 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 |
|------------------------------|------------|------------------------|
| 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

Substance

Carbon monoxide
Carbon dioxide
Irritant Vapors or Gases

Condition

During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. 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/m ³ ;TWA concentration(respirable):0.05 mg/m ³ (1.2 millions of particles/cu. ft.) | |
| SILICA, AMORPHOUS | 60676-86-0 | OSHA | TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft. | |
| SILANE TREATED SILICA | 67762-90-7 | CMRG | CEIL:5 mg/m ³ | |
| SILICA, AMORPHOUS | 67762-90-7 | OSHA | TWA concentration:0.8 mg/m ³ ;TWA:20 millions of particles/cu. ft. | |
| Cobalt, inorganic compounds | 68186-85-6 | ACGIH | TWA(as Co):0.02 mg/m ³ | 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 | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | <i>Not Applicable</i> |
| Flash Point | No flash point |
| Evaporation rate | <i>Not Applicable</i> |
| Flammability (solid, gas) | Not Classified |
| Flammable Limits(LEL) | <i>Not Applicable</i> |

| | |
|---|---|
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapor Pressure | <i>No Data Available</i> |
| Vapor Density | <i>No Data Available</i> |
| Density | 1.2 g/cm ³ - 1.4 g/cm ³ |
| Specific Gravity | 1.2 - 1.4 [<i>Ref Std: WATER=1</i>] |
| Solubility in Water | Negligible |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>Not Applicable</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 H ₂ O & Exempt Solvents | <i>Not Applicable</i> |

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

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 |
| Generic: Cobalt and inorganic cobalt compounds | 68186-85-6 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |
| 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 |
| TRIDYMITE | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| TRIDYMITE | Ingestion | | LD50 estimated to be > 5,000 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 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 |
| TRIDYMITE | Professional judgement | No significant irritation |
| POLY(DIMETHYLSILOXANE) | Rabbit | 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 animal | Carcinogenic |
| 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

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

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

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: | 02/25/16 | Supersedes Date: | 10/10/14 |

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| | | | |
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| Issue Date: | 02/25/16 | Supersedes Date: | 07/07/14 |

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™IMPRINT™ 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

| | |
|----------------------|---|
| 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.

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 FLUID | 68037-59-2 | 10 - 20 Trade Secret * |
| FUSED SILICA | 60676-86-0 | 1 - 10 Trade Secret * |
| POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE | 27306-78-1 | 1 - 10 Trade Secret * |
| SILANE TREATED SILICA | 67762-90-7 | 1 - 10 Trade Secret * |
| ALLYLTRIMETHYLSILANE | 762-72-1 | < 5 Trade Secret * |
| FLUORINATED POLYETHER | Trade Secret* | 1 - 5 Trade Secret * |
| TRIDYMITE | 15468-32-3 | < 1 Trade Secret * |
| Oils, mint, <i>Mentha arvensis piperascensis</i> , var. <i>piperascens</i> , Labiatae. | 68917-18-0 | < 0.5 Trade Secret * |
| QUARTZ SILICA | 14808-60-7 | < 0.5 Trade Secret * |

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

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin Contact:

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

Eye Contact:

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

If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

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

5.3. Special protective actions for fire-fighters

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

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**

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.) | |
| 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 | <i>No Data Available</i> |
| pH | <i>Not Applicable</i> |
| Melting point | <i>Not Applicable</i> |
| Boiling Point | <i>Not Applicable</i> |
| Flash Point | No flash point |
| Evaporation rate | <i>Not Applicable</i> |
| Flammability (solid, gas) | Not Classified |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapor Pressure | <i>No Data Available</i> |
| Vapor Density | <i>No Data Available</i> |
| Density | 1.1 g/cm ³ - 1.3 g/cm ³ |
| Specific Gravity | 1.1 - 1.3 [Ref Std: WATER=1] |
| Solubility in Water | Negligible |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>Not Applicable</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 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

| <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.

| <u>Ingredient</u> | <u>CAS No.</u> | <u>Class Description</u> | <u>Regulation</u> |
|-------------------------|----------------|--------------------------|---|
| 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 |
| 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 mg/kg |
| CRISTOBALITE | Ingestion | | LD50 estimated to be > 5,000 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 |
| POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE | Inhalation-Dust/Mist (4 hours) | Rat | LC50 2 mg/l |
| POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE | Ingestion | Rat | LD50 > 2,000 mg/kg |
| ALLYLTRIMETHYLSILANE | Dermal | Professional judgement | LD50 estimated to be 2,000 - 5,000 mg/kg |
| ALLYLTRIMETHYLSILANE | Ingestion | similar compounds | LD50 estimated to be 2,000 - 5,000 mg/kg |
| FLUORINATED POLYETHER | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| 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 mg/kg |
| QUARTZ SILICA | Ingestion | | LD50 estimated to be > 5,000 mg/kg |
| Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae. | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae. | 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 | Professional judgement | No significant irritation |
| SILANE TREATED SILICA | Rabbit | No significant irritation |
| FUSED SILICA | Rabbit | No significant irritation |
| POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE | Rabbit | No significant irritation |
| TRIDYMITE | Professional judgement | No significant irritation |
| QUARTZ SILICA | Professional judgement | No significant irritation |
| Oils, mint, Mentha arvensis piperascensis, 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 piperascensis, var. piperascens, Labiatae. | 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 |
| POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE | Guinea pig | Not sensitizing |
| Oils, mint, Mentha arvensis piperascensis, var. piperascens, Labiatae. | 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 |
| 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 and animal | Carcinogenic |
| 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 |
| POLYALKYLENEOXIDE MODIFIED HEPTAMETHYLTRISILOXANE | Ingestion | Some positive reproductive/developmental data exist, but the data are not sufficient for classification | Rat | NOAEL 450 mg/kg/day | prematuring & during gestation |
| FLUORINATED POLYETHER | Ingestion | Not toxic to reproduction and/or development | Rat | NOAEL 1,000 mg/kg/day | prematuring into lactation |
| FLUORINATED POLYETHER | Ingestion | Not toxic to female reproduction | Rat | NOAEL 1,000 mg/kg/day | prematuring into lactation |
| FLUORINATED POLYETHER | Ingestion | Not toxic to male reproduction | Rat | NOAEL 1,000 mg/kg/day | prematuring into lactation |

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 |
| FLUORINATED POLYETHER | Ingestion | auditory system heart endocrine system hematopoietic system liver | All data are negative | Rat | NOAEL 1,000 mg/kg/day | 28 days |

| | | | | | | |
|---------------|------------|---|---|-------|------------------------|--------------------------|
| | | immune system muscles nervous system eyes | | | | |
| 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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