



Safety Data Sheet

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|------------------------|-----------|-------------------------|----------|
| Document Group: | 16-2600-1 | Version Number: | 9.01 |
| Issue Date: | 04/15/15 | Supersedes Date: | 06/13/03 |

Product identifier

3M™ ESPE™IMPREGUM™ F, Refill

ID Number(s):

70-2011-0260-8, 70-2011-0261-6, 70-2011-0621-1, 70-2011-1280-5, 70-2011-1595-6

Recommended use

Dental Product, Impression material.

Restrictions on use

For use by dental professionals.

Supplier's details

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

Emergency telephone number

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:

16-2599-5, 16-2598-7

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| Document Group: | 16-2599-5 | Version Number: | 9.00 |
| Issue Date: | 04/04/18 | Supersedes Date: | 12/28/17 |

SECTION 1: Identification

1.1. Product identifier

3M™ IMPREGUM F Catalyst

Product Identification Numbers

70-2011-0258-2, 70-2011-0618-7, 70-2011-3070-8, 70-2011-3073-2, 70-2011-3763-8, 70-2011-3765-3

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Impression material

Restrictions on use

For use only by dental professionals in approved indications.

1.3. Supplier's details

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

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

2.1. Hazard classification

Skin Sensitizer: Category 1B.

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

2.2. Label elements

Signal word

Warning

Symbols

Exclamation mark |

Pictograms**Hazard Statements**

May cause an allergic skin reaction.

May cause drowsiness or dizziness.

Precautionary Statements**Prevention:**

Use only in a well-ventilated area.

Wear protective gloves.

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

Response:

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

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

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

Storage:

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

Disposal:

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

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--|-------------------|------------------------|
| CITRIC ESTER | 77-90-7 | 30 - 40 Trade Secret * |
| SULFONIUM SALT | 72140-65-9 | 30 - 40 Trade Secret * |
| SILANE TREATAD SILICA | 68909-20-6 | 15 - 25 Trade Secret * |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | 68855-54-9 | 1 - 20 Trade Secret * |
| POLYETHYLENE-POLYPROPYLENE GLYCOL | 9003-11-6 | 5 - 10 Trade Secret * |

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

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

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

Skin Contact:

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

Eye Contact:

No need for first aid is anticipated.

If Swallowed:

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

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

See Section 11.1. Information on toxicological effects.

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

Not applicable

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

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

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products**Substance**

Carbon monoxide
Carbon dioxide
Irritant Vapors or Gases

Condition

During Combustion
During Combustion
During Combustion

5.3. Special protective actions for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

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

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

Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Do not get in eyes. A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

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

| Ingredient | C.A.S. No. | Agency | Limit type | Additional Comments |
|-------------------|------------|--------|--|-----------------------------|
| Cristobalite | 68855-54-9 | ACGIH | TWA(respirable fraction):0.025 mg/m3 | A2: Suspected human carcin. |
| Cristobalite | 68855-54-9 | OSHA | TWA concentration(respirable):0.05 mg/m3(1.2 millions of particles/cu. ft.);TWA:0.05 mg/m3 | |
| SILICA, AMORPHOUS | 68855-54-9 | OSHA | TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft. | |
| SILICA, AMORPHOUS | 68909-20-6 | OSHA | TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft. | |

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

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

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use in a well-ventilated area.

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: | slightly acrid odor, dark red 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 | Flash point > 93 °C (200 °F) |
| Evaporation rate | <i>Not Applicable</i> |
| Flammability (solid, gas) | Not Classified |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Vapor Pressure | <i>Not Applicable</i> |
| Vapor Density | <i>Not Applicable</i> |
| Density | 1.1 - 1.4 g/cm ³ |
| Specific Gravity | > 1 [Ref Std: WATER=1] |
| Solubility in Water | Negligible |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | <i>No Data Available</i> |
| Volatile Organic Compounds | <i>No Data Available</i> |
| Percent volatile | <i>No Data Available</i> |
| VOC Less H ₂ O & Exempt Solvents | <i>No Data Available</i> |

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Strong acids

Strong bases

Strong oxidizing agents

10.6. Hazardous decomposition products

| <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:

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

Eye Contact:

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

Ingestion:

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

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:

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

Carcinogenicity:

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

Contains a chemical or chemicals which can cause cancer.

| Ingredient | CAS No. | Class Description | Regulation |
|-----------------------|------------|--------------------------------|---|
| SILICA, CRYSTALLINE | 68855-54-9 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| SILICA, CRYSTALLINE | 68855-54-9 | Known human carcinogen | National Toxicology Program Carcinogens |
| Generic: Cristobalite | 68855-54-9 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |

Toxicological Data

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

Acute Toxicity

| Name | Route | Species | Value |
|--|--------------------------------|------------------------|------------------------------------|
| Overall product | Ingestion | Rat | LD50 > 2,000 mg/kg |
| SULFONIUM SALT | Dermal | Rat | LD50 > 2,000 mg/kg |
| SULFONIUM SALT | Ingestion | Rat | LD50 300-2000 mg/kg |
| CITRIC ESTER | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| CITRIC ESTER | Ingestion | Rat | LD50 > 25,000 mg/kg |
| SILANE TREATAD SILICA | Dermal | Rabbit | LD50 > 5,000 mg/kg |
| SILANE TREATAD SILICA | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 0.691 mg/l |
| SILANE TREATAD SILICA | Ingestion | Rat | LD50 > 5,110 mg/kg |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.7 mg/l |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Ingestion | Rat | LD50 > 2,000 mg/kg |
| POLYETHYLENE-POLYPROPYLENE GLYCOL | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| POLYETHYLENE-POLYPROPYLENE GLYCOL | Ingestion | Rat | LD50 5,700 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

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

Serious Eye Damage/Irritation

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

Skin Sensitization

| Name | Species | Value |
|--|------------------|----------------|
| SULFONIUM SALT | Mouse | Sensitizing |
| SILANE TREATAD SILICA | Human and animal | Not classified |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Mouse | Not classified |

Respiratory Sensitization

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

Germ Cell Mutagenicity

| Name | Route | Value |
|-----------------------|----------|---------------|
| SULFONIUM SALT | In Vitro | Not mutagenic |
| SILANE TREATAD SILICA | In Vitro | Not mutagenic |

| | | |
|--|----------|--|
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | In Vitro | Some positive data exist, but the data are not sufficient for classification |
|--|----------|--|

Carcinogenicity

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

Reproductive Toxicity

Reproductive and/or Developmental Effects

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|----------------|-----------|-----------------------------------|-----------------------------------|---------|-------------------|-------------------|
| SULFONIUM SALT | Ingestion | central nervous system depression | May cause drowsiness or dizziness | Rat | LOAEL 2,000 mg/kg | |
| SULFONIUM SALT | Ingestion | respiratory system | Not classified | Rat | NOAEL 300 mg/kg | |

Specific Target Organ Toxicity - repeated exposure

| Name | Route | Target Organ(s) | Value | Species | Test Result | Exposure Duration |
|--|------------|---|--|---------|-----------------------|-----------------------|
| SILANE TREATAD SILICA | Inhalation | respiratory system silicosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Inhalation | silicosis | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | occupational exposure |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Ingestion | hematopoietic system eyes kidney and/or bladder | Not classified | Rat | NOAEL 3,738 mg/kg/day | 90 days |

Aspiration Hazard

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

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

SECTION 12: Ecological information

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

13.1. Disposal methods

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

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

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Not applicable

Health Hazards

Respiratory or Skin Sensitization

Specific target organ toxicity (single or repeated exposure)

15.2. State Regulations

Contact 3M for more information.

15.3. Chemical Inventories

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.

| | | | |
|------------------------|-----------|-------------------------|----------|
| Document Group: | 16-2599-5 | Version Number: | 9.00 |
| Issue Date: | 04/04/18 | Supersedes Date: | 12/28/17 |

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| Document Group: | 16-2598-7 | Version Number: | 10.01 |
| Issue Date: | 01/11/18 | Supersedes Date: | 02/25/16 |

SECTION 1: Identification

1.1. Product identifier

3M™ ESPE™ IMPREGUM F Base

Product Identification Numbers

70-2011-3766-1

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

Serious Eye Damage/Irritation: Category 2B.

2.2. Label elements

Signal word

Warning

Symbols

Not applicable

Pictograms

Not applicable

Hazard Statements

Causes eye irritation.

Precautionary Statements

Prevention:

Wash thoroughly after handling.

Response:

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|---|-------------|------------------------|
| Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate] | 110531-92-5 | 50 - 70 Trade Secret * |
| DIBENZYL TOLUENE | 26898-17-9 | 10 - 20 Trade Secret * |
| FATTY ACIDS TRIGLYCERIDES | 67701-27-3 | 10 - 20 Trade Secret * |
| Flux calcined diatomaceous earth | 68855-54-9 | 1 - 20 Trade Secret * |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | 68855-54-9 | 1 - 20 Trade Secret * |
| C.I. PIGMENT WHITE 5 | 1345-05-7 | < 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:

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

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

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 |
|-----------------|------------|--------|----------------------|---------------------|
| BARIUM, SOLUBLE | 1345-05-7 | OSHA | TWA(as Ba):0.5 mg/m3 | |

| | | | | |
|---------------------------|------------|-------|--|--------------------------------|
| COMPOUNDS | | | | |
| BARIUM, SOLUBLE COMPOUNDS | 1345-05-7 | ACGIH | TWA(as Ba):0.5 mg/m3 | A4: Not class. as human carcin |
| SILICA, AMORPHOUS | 68855-54-9 | OSHA | TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft. | |
| Cristobalite | 68855-54-9 | OSHA | TWA concentration(respirable):0.05 mg/m3(1.2 millions of particles/cu. ft.);TWA:0.05 mg/m3 | |
| Cristobalite | 68855-54-9 | ACGIH | TWA(respirable fraction):0.025 mg/m3 | A2: Suspected human 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

No protective gloves 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: | characteristic odor, gray 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>Not Applicable</i> |
| Flammability (solid, gas) | Not Classified |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |

| | |
|---|---------------------------|
| Vapor Pressure | <i>Not Applicable</i> |
| Vapor Density | <i>Not Applicable</i> |
| Density | 1 - 1.2 g/cm ³ |
| Specific Gravity | > 1 [Ref Std: WATER=1] |
| Solubility in Water | Negligible |
| Solubility- non-water | <i>No Data Available</i> |
| Partition coefficient: n-octanol/ water | <i>No Data Available</i> |
| Autoignition temperature | <i>No Data Available</i> |
| Decomposition temperature | <i>No Data Available</i> |
| Viscosity | <i>No Data Available</i> |
| Volatile Organic Compounds | <i>No Data Available</i> |
| Percent volatile | <i>No Data Available</i> |
| VOC Less H ₂ O & Exempt Solvents | <i>No Data Available</i> |

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat

10.5. Incompatible materials

Strong acids

Strong bases

Strong oxidizing agents

10.6. Hazardous decomposition products

| <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:

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

Eye Contact:

Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

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

Carcinogenicity:

| Ingredient | CAS No. | Class Description | Regulation |
|-----------------------|----------------|--------------------------------|---|
| SILICA, CRYSTALLINE | 68855-54-9 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| SILICA, CRYSTALLINE | 68855-54-9 | Known human carcinogen | National Toxicology Program Carcinogens |
| Generic: Cristobalite | 68855-54-9 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |

Toxicological Data

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

Acute Toxicity

| Name | Route | Species | Value |
|---|--------------------------------|-----------------------|--|
| Overall product | Dermal | | No data available; calculated ATE >5,000 mg/kg |
| Overall product | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate] | Dermal | Professional judgment | LD50 Not applicable |
| Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate] | Ingestion | Rat | LD50 > 2,000 mg/kg |
| DIBENZYL TOLUENE | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| DIBENZYL TOLUENE | Ingestion | Rat | LD50 > 10,360 mg/kg |
| FATTY ACIDS TRIGLYCERIDES | Dermal | Rabbit | LD50 > 2,000 mg/kg |
| FATTY ACIDS TRIGLYCERIDES | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Flux calcined diatomaceous earth | Dermal | Professional judgment | LD50 estimated to be > 5,000 mg/kg |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Dermal | Professional judgment | LD50 estimated to be > 5,000 mg/kg |
| Flux calcined diatomaceous earth | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.7 mg/l |
| Flux calcined diatomaceous earth | Ingestion | Rat | LD50 > 2,000 mg/kg |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Inhalation-Dust/Mist (4 hours) | Rat | LC50 > 2.7 mg/l |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Ingestion | Rat | LD50 > 2,000 mg/kg |

| | | | |
|----------------------|--------------------------------|-------------------|---------------------|
| C.I. PIGMENT WHITE 5 | Ingestion | Rat | LD50 > 15,000 mg/kg |
| C.I. PIGMENT WHITE 5 | Dermal | similar compounds | LD50 > 1,000 mg/kg |
| C.I. PIGMENT WHITE 5 | Inhalation-Dust/Mist (4 hours) | similar compounds | LC50 > 2.52 mg/l |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

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

Serious Eye Damage/Irritation

| Name | Species | Value |
|---|---------|-------------------|
| Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate] | Rabbit | Moderate irritant |
| Flux calcined diatomaceous earth | Rabbit | Mild irritant |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Rabbit | Mild irritant |

Skin Sensitization

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

Respiratory Sensitization

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

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|--|
| Furan, tetrahydro-, polymer with oxirane, bis[[3-(1-aziridinyl)butyl]carbamate] | In Vitro | Not mutagenic |
| Flux calcined diatomaceous earth | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | In Vitro | Some positive data exist, but the data are not sufficient for classification |

Carcinogenicity

| Name | Route | Species | Value |
|--|------------|------------------|--------------|
| Flux calcined diatomaceous earth | Inhalation | Human and animal | Carcinogenic |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Inhalation | Human and animal | Carcinogenic |

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

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 |
|--|------------|---|--|---------|-----------------------|-----------------------|
| Flux calcined diatomaceous earth | Inhalation | silicosis | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | occupational exposure |
| Flux calcined diatomaceous earth | Ingestion | hematopoietic system eyes kidney and/or bladder | Not classified | Rat | NOAEL 3,738 mg/kg/day | 90 days |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Inhalation | silicosis | Causes damage to organs through prolonged or repeated exposure | Human | NOAEL Not available | occupational exposure |
| Flux calcined diatomaceous earth (cristobalite 1 - <10%) | Ingestion | hematopoietic system eyes kidney and/or bladder | Not classified | Rat | NOAEL 3,738 mg/kg/day | 90 days |

Aspiration Hazard

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

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

SECTION 12: Ecological information**Ecotoxicological information**

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

Chemical fate information

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

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

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

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

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

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

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

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

Not applicable

Health Hazards

Serious eye damage or eye irritation

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

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

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

15.3. Chemical Inventories

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

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

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

SECTION 16: Other information**NFPA Hazard Classification**

Health: 1 **Flammability:** 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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