



## Material Safety Data Sheet

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**PRODUCT NAME:** PARADIGM™ HEAVY BODY FAST SET VPS IMPRESSION MATERIAL  
**MANUFACTURER:** 3M  
**DIVISION:** 3M ESPE Dental Products  
**ADDRESS:** 3M Center  
St. Paul, MN 55144-1000

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

**Issue Date:** 03/02/11  
**Supersedes Date:** Initial Issue  
**Document Group:** 29-4269-6

### ID Number(s):

70-2010-7991-3, 70-2010-7993-9

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

29-4266-2, 29-4268-8

No revision information is available.

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 29-4266-2 | <b>Version Number:</b>  | 4.00     |
| <b>Issue Date:</b>     | 03/20/14  | <b>Supersedes Date:</b> | 02/25/14 |

### SECTION 1: Identification

#### 1.1. Product identifier

PARADIGM™ HEAVY BODY FAST SET BASE VPS IMPRESSION MATERIAL

#### Product Identification Numbers

LE-F100-0940-4

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

##### Recommended use

Dental Product, Impression material

##### Restrictions on use

For use only by dental professionals

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | 3M ESPE Dental Products                 |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 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                |
|--|---------------|------------------------|
| QUARTZ SILICA                                    | 14808-60-7    | 45 - 55 Trade Secret * |
| VINYL POLYDIMETHYLSILOXANE                       | 68083-19-2    | 25 - 35 Trade Secret * |
| POLYDIMETHYL-METHYLHYDROGEN (NJTSRN 26175-23140) | Trade Secret* | 10 - 20 Trade Secret * |
| SILANE TREATED SILICA                            | 67762-90-7    | 5 - 10 Trade Secret *  |
| POLYETHYLENE GLYCOL, SILOXANE-TERMINATED         | 27306-78-1    | < 1 Trade Secret *     |
| CHROMIUM OXIDE (CR2O3)                           | 1308-38-9     | < 0.5 Trade Secret *   |
| C.I. PIGMENT BLUE 28                             | 1345-16-0     | < 0.5 Trade Secret *   |
| GLYCOLS, POLYETHYLENE, ALLYL METHYL ETHER        | 27252-80-8    | < 0.5 Trade Secret *   |

NJTS or NJTSRN: New Jersey Trade Secret Registry Number.

\*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

Condition

During Combustion  
During Combustion

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

No unusual fire or explosion hazards 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.

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

No special storage requirements.

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

**8.1. Control parameters**

**Occupational exposure limits**

| Ingredient                           | C.A.S. No. | Agency                               | Limit type                              | Additional Comments |
|--------------------------------------|------------|--------------------------------------|---|---------------------|
| CHROMIUM (III)<br>COMPOUNDS          | 1308-38-9  | US Dept of<br>Labor - OSHA           | TWA(as Cr):0.5 mg/m3                    |                     |
| Chromium(3+), inorganic<br>compounds | 1308-38-9  | Amer Conf of<br>Gov. Indust.<br>Hyg. | TWA(as Cr):0.5 mg/m3                    |                     |
| Chromium, insoluble salts            | 1308-38-9  | US Dept of<br>Labor - OSHA           | TWA(as Cr):1 mg/m3                      |                     |
| Cobalt, inorganic compounds          | 1345-16-0  | Amer Conf of<br>Gov. Indust.<br>Hyg. | TWA(as Co):0.02 mg/m3                   |                     |
| QUARTZ SILICA                        | 14808-60-7 | Amer Conf of<br>Gov. Indust.<br>Hyg. | TWA(respirable<br>fraction):0.025 mg/m3 |                     |

|                       |            |                                |   |  |
|-----------------------|------------|--------------------------------|---|--|
| QUARTZ SILICA         | 14808-60-7 | US Dept of Labor - OSHA        | TWA concentration(as total dust):0.3 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.) |  |
| SILANE TREATED SILICA | 67762-90-7 | Chemical Manufacturer Rec Guid | CEIL:5 mg/m3  |  |
| SILICA, AMORPHOUS     | 67762-90-7 | US Dept of Labor - OSHA        | TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.  |  |

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists  
 American Indust. Hygiene Assoc : American Industrial Hygiene Association  
 Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines  
 US Dept of Labor - 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**

Respiratory protection is not required.

**SECTION 9: Physical and chemical properties**

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

|                                  |                            |
|----------------------------------|----------------------------|
| <b>General Physical Form:</b>    | Solid                      |
| <b>Specific Physical Form:</b>   | Putty                      |
| <b>Odor, Color, Grade:</b>       | Characteristic odor, Green |
| <b>Odor threshold</b>            | <i>No Data Available</i>   |
| <b>pH</b>                        | <i>Not Applicable</i>      |
| <b>Melting point</b>             | <i>No Data Available</i>   |
| <b>Boiling Point</b>             | <i>Not Applicable</i>      |
| <b>Flash Point</b>               | No flash point             |
| <b>Evaporation rate</b>          | <i>Not Applicable</i>      |
| <b>Flammability (solid, gas)</b> | Not Classified             |
| <b>Flammable Limits(LEL)</b>     | <i>Not Applicable</i>      |
| <b>Flammable Limits(UEL)</b>     | <i>Not Applicable</i>      |
| <b>Vapor Pressure</b>            | <i>Not Applicable</i>      |

|   |                                      |
|---|--------------------------------------|
| Vapor Density                           | <i>Not Applicable</i>                |
| Density                                 | $\geq 1 \text{ g/cm}^3$              |
| Specific Gravity                        | $\geq 1$ [ <i>Ref Std: WATER=1</i> ] |
| Solubility in Water                     | Nil                                  |
| Solubility- non-water                   | <i>No Data Available</i>             |
| Partition coefficient: n-octanol/ water | <i>Not Applicable</i>                |
| Autoignition temperature                | <i>Not Applicable</i>                |
| Decomposition temperature               | <i>No Data Available</i>             |
| Viscosity                               | <i>No Data Available</i>             |
| Volatile Organic Compounds              | <i>No Data Available</i>             |
| Percent volatile                        | <i>No Data Available</i>             |
| VOC Less H2O & Exempt Solvents          | <i>No Data Available</i>             |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

This material 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

None known.

### 10.5. Incompatible materials

None known.

### 10.6. Hazardous decomposition products

#### Substance

None known.

#### Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

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

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

The information below represents toxicological information associated with individual components of the uncured

product. Once properly mixed and cured, the product is safe for its intended use.

### 11.1. Information on Toxicological effects

#### Signs and Symptoms of Exposure

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

#### Inhalation:

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

#### Skin Contact:

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

#### Eye Contact:

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

#### Ingestion:

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

#### Carcinogenicity:

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

Contains a chemical or chemicals which can cause cancer.

| Ingredient                                     | C.A.S. No. | Class Description              | Regulation                                  |
|--|------------|--------------------------------|---|
| Generic: Cobalt and inorganic cobalt compounds | 1345-16-0  | Grp. 2B: Possible human carc.  | International Agency for Research on Cancer |
| QUARTZ SILICA                                  | 14808-60-7 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| SILICA, CRYSTAL AIRRESP                        | 14808-60-7 | Known human carcinogen         | National Toxicology Program Carcinogens     |

#### Toxicological Data

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

#### Acute Toxicity

| Name                                     | Route                          | Species | Value   |
|--|--------------------------------|---------|---|
| Overall product                          | Ingestion                      |         | No data available; calculated ATE > 5,000 mg/kg |
| QUARTZ SILICA                            | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg              |
| QUARTZ SILICA                            | Ingestion                      |         | LD50 estimated to be > 5,000 mg/kg              |
| VINYL POLYDIMETHYLSILOXANE               | Dermal                         | Rabbit  | LD50 > 15,440 mg/kg                             |
| VINYL POLYDIMETHYLSILOXANE               | Ingestion                      | Rat     | LD50 > 15,440 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                              |
| CHROMIUM OXIDE (CR2O3)                   | Ingestion                      | Rat     | LD50 > 5,000 mg/kg                              |
| C.I. PIGMENT BLUE 28                     | Ingestion                      | Rat     | LD50 > 10,000 mg/kg                             |

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

| Name                                     | Species | Value                     |
|--|---------|---------------------------|
| QUARTZ SILICA                            |         | No significant irritation |
| SILANE TREATED SILICA                    | Rabbit  | No significant irritation |
| POLYETHYLENE GLYCOL, SILOXANE-TERMINATED | Rabbit  | No significant irritation |



**Serious Eye Damage/Irritation**

| Name                                     | Species | Value                     |
|--|---------|---------------------------|
| SILANE TREATED SILICA                    | Rabbit  | No significant irritation |
| POLYETHYLENE GLYCOL, SILOXANE-TERMINATED | Rabbit  | Severe irritant           |

**Skin Sensitization**

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

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

| Name                                     | Route    | Value  |
|--|----------|--|
| 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 |
| SILANE TREATED SILICA                    | In Vitro | Not mutagenic  |
| POLYETHYLENE GLYCOL, SILOXANE-TERMINATED | In Vitro | Not mutagenic  |
| POLYETHYLENE GLYCOL, SILOXANE-TERMINATED | In vivo  | Not mutagenic  |

**Carcinogenicity**

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

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name                                     | Route     | Value   | Species | Test Result           | Exposure Duration              |
|--|-----------|---|---------|-----------------------|--------------------------------|
| 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 |

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

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

**Specific Target Organ Toxicity - repeated exposure**

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

|                       |            |                                |  |       |                     |                       |
|-----------------------|------------|--------------------------------|--|-------|---------------------|-----------------------|
| QUARTZ SILICA         | 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 |

**Aspiration Hazard**

| Name | Value |
|------|-------|
|      |       |

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

**SECTION 12: Ecological information**

**Ecotoxicological information**

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

**Chemical fate information**

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

**SECTION 13: Disposal considerations**

**13.1. Disposal methods**

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

Incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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 - Yes    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> |
|--|------------------|----------------|
| C.I. PIGMENT BLUE 28 (Cobalt, inorganic compounds) | 1345-16-0        | < 0.5          |

### 15.2. State Regulations

Contact 3M for more information.

### 15.3. Chemical Inventories

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

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

Contact 3M for more information.

### 15.4. International Regulations

Contact 3M for more information.

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

## SECTION 16: Other information

### NFPA Hazard Classification

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

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

|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 29-4266-2 | <b>Version Number:</b>  | 4.00     |
| <b>Issue Date:</b>     | 03/20/14  | <b>Supersedes Date:</b> | 02/25/14 |

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
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| <b>Issue Date:</b>     | 03/20/14  | <b>Supersedes Date:</b> | 07/06/12 |

### SECTION 1: Identification

#### 1.1. Product identifier

PARADIGM™ HEAVY BODY FAST SET CATALYST VPS IMPRESSION MATERIAL

#### Product Identification Numbers

LE-F100-0940-5

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

##### Recommended use

Dental Product, Impression material

##### Restrictions on use

For use only by dental professionals

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | 3M ESPE Dental Products                 |
| <b>ADDRESS:</b>      | 3M Center, St. Paul, MN 55144-1000, USA |
| <b>Telephone:</b>    | 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                |
|------------------------|------------|------------------------|
| QUARTZ SILICA          | 14808-60-7 | 50 - 60 Trade Secret * |
| DIMETHYLPOLYSILOXANE   | Unknown    | 30 - 40 Trade Secret * |
| SILANE TREATED SILICA  | 68611-44-9 | 1 - 10 Trade Secret *  |
| CHROMIUM OXIDE (CR2O3) | 1308-38-9  | < 1 Trade Secret *     |
| C.I. PIGMENT BLUE 28   | 1345-16-0  | < 1 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

Condition

During Combustion  
During Combustion

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

No unusual fire or explosion hazards 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**

No special storage requirements.

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

**8.1. Control parameters**

**Occupational exposure limits**

| Ingredient    | C.A.S. No. | Agency                         | Limit type  | Additional Comments |
|---------------|------------|--------------------------------|---|---------------------|
| QUARTZ SILICA | 14808-60-7 | Amer Conf of Gov. Indust. Hyg. | TWA(respirable fraction):0.025 mg/m3  |                     |
| QUARTZ SILICA | 14808-60-7 | US Dept of Labor - OSHA        | TWA concentration(as total dust):0.3 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.) |                     |

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists  
 American Indust. Hygiene Assoc : American Industrial Hygiene Association  
 Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines  
 US Dept of Labor - 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**

|  |                                  |
|--|----------------------------------|
| <b>General Physical Form:</b>                  | Solid                            |
| <b>Specific Physical Form:</b>                 | Putty                            |
| <b>Odor, Color, Grade:</b>                     | Characterisitic odor, Green      |
| <b>Odor threshold</b>                          | <i>No Data Available</i>         |
| <b>pH</b>                                      | <i>Not Applicable</i>            |
| <b>Melting point</b>                           | <i>No Data Available</i>         |
| <b>Boiling Point</b>                           | <i>Not Applicable</i>            |
| <b>Flash Point</b>                             | No flash point                   |
| <b>Evaporation rate</b>                        | <i>Not Applicable</i>            |
| <b>Flammability (solid, gas)</b>               | Not Classified                   |
| <b>Flammable Limits(LEL)</b>                   | <i>Not Applicable</i>            |
| <b>Flammable Limits(UEL)</b>                   | <i>Not Applicable</i>            |
| <b>Vapor Pressure</b>                          | <i>Not Applicable</i>            |
| <b>Vapor Density</b>                           | <i>Not Applicable</i>            |
| <b>Density</b>                                 | >= 1 g/cm3                       |
| <b>Specific Gravity</b>                        | >= 1 [ <i>Ref Std: WATER=1</i> ] |
| <b>Solubility in Water</b>                     | Nil                              |
| <b>Solubility- non-water</b>                   | <i>No Data Available</i>         |
| <b>Partition coefficient: n-octanol/ water</b> | <i>Not Applicable</i>            |
| <b>Autoignition temperature</b>                | <i>Not Applicable</i>            |
| <b>Decomposition temperature</b>               | <i>No Data Available</i>         |
| <b>Viscosity</b>                               | <i>No Data Available</i>         |
| <b>Volatile Organic Compounds</b>              | <i>No Data Available</i>         |
| <b>Percent volatile</b>                        | <i>No Data Available</i>         |
| <b>VOC Less H2O &amp; Exempt Solvents</b>      | <i>No Data Available</i>         |

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

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

**10.2. Chemical stability**

Stable.



**10.3. Possibility of hazardous reactions**

Hazardous polymerization will not occur.

**10.4. Conditions to avoid**

None known.

**10.5. Incompatible materials**

None known.

**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 individual components of the uncured product. Once properly mixed and cured, the product is safe for its intended use.

**11.1. Information on Toxicological effects**

**Signs and Symptoms of Exposure**

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

**Inhalation:**

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

**Skin Contact:**

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

**Eye Contact:**

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

**Ingestion:**

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

**Carcinogenicity:**

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

Contains a chemical or chemicals which can cause cancer.

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

|                         |            |                                |   |
|-------------------------|------------|--------------------------------|---|
| QUARTZ SILICA           | 14808-60-7 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| SILICA, CRYSTAL AIRRESP | 14808-60-7 | Known human carcinogen         | National Toxicology Program Carcinogens     |

**Toxicological Data**

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

**Acute Toxicity**

| Name                   | Route                          | Species | Value   |
|------------------------|--------------------------------|---------|---|
| Overall product        | Dermal                         |         | No data available; calculated ATE > 5,000 mg/kg |
| Overall product        | Ingestion                      |         | No data available; calculated ATE > 5,000 mg/kg |
| QUARTZ SILICA          | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg              |
| QUARTZ SILICA          | Ingestion                      |         | LD50 estimated to be > 5,000 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                              |
| C.I. PIGMENT BLUE 28   | Ingestion                      | Rat     | LD50 > 10,000 mg/kg                             |
| CHROMIUM OXIDE (CR2O3) | Ingestion                      | Rat     | LD50 > 5,000 mg/kg                              |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name                  | Species | Value                     |
|-----------------------|---------|---------------------------|
| QUARTZ SILICA         |         | No significant irritation |
| SILANE TREATED SILICA | Rabbit  | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                  | Species | Value                     |
|-----------------------|---------|---------------------------|
| SILANE TREATED SILICA | Rabbit  | No significant irritation |

**Skin Sensitization**

| Name                  | Species          | Value           |
|-----------------------|------------------|-----------------|
| SILANE TREATED SILICA | Human and animal | Not sensitizing |

**Respiratory Sensitization**

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

**Germ Cell Mutagenicity**

| Name                  | Route    | Value  |
|-----------------------|----------|--|
| 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 |
| SILANE TREATED SILICA | In Vitro | Not mutagenic  |

**Carcinogenicity**

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

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test Result | Exposure Duration |
|------|-------|-------|---------|-------------|-------------------|
|      |       |       |         |             |                   |

|                       |           |                                  |     |                       |                      |
|-----------------------|-----------|----------------------------------|-----|-----------------------|----------------------|
| 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**

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

**Specific Target Organ Toxicity - repeated exposure**

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

**Aspiration Hazard**

| Name | Value |
|------|-------|
|      |       |

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

**SECTION 12: Ecological information**

**Ecotoxicological information**

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

**Chemical fate information**

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

**SECTION 13: Disposal considerations**

**13.1. Disposal methods**

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

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

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

**SECTION 14: Transport Information**

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.

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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