



## Material Safety Data Sheet

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**PRODUCT NAME:** 3M™ Metal Wet Machine Kit  
**MANUFACTURER:** 3M  
**DIVISION:** Abrasive Systems Division  
**ADDRESS:** 3M Center, St. Paul, MN 55144-1000, USA  
**Telephone:** 1-888-3M HELPS (1-888-364-3577)

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

**Issue Date:** 08/12/14  
**Supersedes Date:** 06/03/14  
**Document Group:** 28-6085-6

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

18-8875-9, 24-0733-6, 24-0117-2

Revision Changes:

Kit: Component document group number(s) information was modified.

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
| <b>Document Group:</b> | 24-0733-6 | <b>Version Number:</b>  | 3.13     |
| <b>Issue Date:</b>     | 03/28/17  | <b>Supersedes Date:</b> | 08/26/16 |

### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Abrasive Products, 777F Belts

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

##### Recommended use

Abrasive Product

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Abrasive Systems Division               |
| <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

#### 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.

51% of the mixture consists of ingredients of unknown acute oral toxicity.

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

| <b>Ingredient</b>   | <b>C.A.S. No.</b> | <b>% by Wt</b> |
|---|-------------------|----------------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1         | 10 - 40        |
| Inorganic Fluoride  | 14075-53-7        | 2 - 15         |
| Inorganic Fluoride  | 15096-52-3        | 2 - 10         |
| Filler  | 13983-17-0        | 0 - 15         |
| Filler  | 1317-65-3         | 2 - 15         |
| Titanium Dioxide  | 13463-67-7        | 0.1 - 1.5      |
| Pigment   | 1332-37-2         | 0.1 - 1.5      |
| Cured Resin   | Mixture           | 10 - 40        |
| Cloth Backing   | None              | 5 - 40         |

**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**

When fire fighting conditions are severe and total thermal decomposition of the product is possible, 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**

Observe precautions from other sections.

**6.2. Environmental precautions**

Avoid release to the environment.

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

Not applicable.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Do not breathe thermal decomposition products. For industrial or professional use only. Avoid breathing of dust created by sanding, grinding or machining. Damaged product can break apart during use and cause serious injury to face or eyes. Check product for damage such as cracks or nicks prior to use. Replace if damaged. Always wear eye and face protection when working at sanding or grinding operations or when near such operations. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Combustible dust may form by action of this product on another material (substrate). Dust generated from the substrate during use of this product may be explosive if in sufficient concentration with an ignition source. Dust deposits should not be allowed to accumulate on surfaces because of the potential for secondary explosions.

**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**

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            |
|---|------------|--------|--|--------------------------------|
| Filler  | 1317-65-3  | OSHA   | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 |                                |
| Aluminum, insoluble compounds                                       | 1344-28-1  | ACGIH  | TWA(respirable fraction):1 mg/m3                             | A4: Not class. as human carcin |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1  | OSHA   | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 |                                |
| Titanium Dioxide  | 13463-67-7 | ACGIH  | TWA:10 mg/m3   | A4: Not class. as human carcin |
| Titanium Dioxide  | 13463-67-7 | OSHA   | TWA(as total dust):15 mg/m3                                  |                                |
| Aluminum, insoluble compounds                                       | 15096-52-3 | ACGIH  | TWA(respirable fraction):1 mg/m3                             | A4: Not class. as human carcin |
| FLUORIDES   | 15096-52-3 | ACGIH  | TWA(as F):2.5 mg/m3  | A4: Not class. as human carcin |

|           |            |      |  |  |
|-----------|------------|------|--|--|
| FLUORIDES | 15096-52-3 | OSHA | TWA(as dust):2.5 mg/m3;TWA(as F):2.5 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**

For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use with appropriate local exhaust ventilation sufficient to maintain levels of thermal decomposition products below their exposure guidelines. Provide appropriate local exhaust ventilation for sanding, grinding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Provide local exhaust at process emission sources to control exposure near the source and to prevent the escape of dust into the work area. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

**8.2.2. Personal protective equipment (PPE)**

**Eye/face protection**

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations. 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**

Wear appropriate gloves to minimize risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

**Respiratory protection**

Assess exposure concentrations of all materials involved in the work process. Consider material being abraded when determining the appropriate respiratory protection. Select and use appropriate respirators to prevent inhalation overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

**SECTION 9: Physical and chemical properties**

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

|                               |                        |
|-------------------------------|------------------------|
| <b>General Physical Form:</b> | Solid                  |
| <b>Odor, Color, Grade:</b>    | Solid Abrasive Product |
| <b>Odor threshold</b>         | <i>Not Applicable</i>  |
| <b>pH</b>                     | <i>Not Applicable</i>  |
| <b>Melting point</b>          | <i>Not Applicable</i>  |
| <b>Boiling Point</b>          | <i>Not Applicable</i>  |

|   |                       |
|---|-----------------------|
| Flash Point                             | <i>Not Applicable</i> |
| 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                                 | <i>Not Applicable</i> |
| Specific Gravity                        | <i>Not Applicable</i> |
| Solubility In Water                     | <i>Not Applicable</i> |
| Solubility- non-water                   | <i>Not Applicable</i> |
| Partition coefficient: n-octanol/ water | <i>Not Applicable</i> |
| Autoignition temperature                | <i>Not Applicable</i> |
| Decomposition temperature               | <i>Not Applicable</i> |
| Viscosity                               | <i>Not Applicable</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.

If the product is exposed to extreme condition of heat from misuse or equipment failure, toxic decomposition products that include hydrogen fluoride and perfluoroisobutylene can occur. Extreme heat arising from situations such as misuse or equipment failure can generate hydrogen fluoride as a decomposition product.

## 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.

### 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:**

Dust from grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Skin Contact:**

Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

**Eye Contact:**

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Dust created by grinding, sanding, or machining may cause 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                                  |
|------------------|------------|-------------------------------|---|
| Titanium Dioxide | 13463-67-7 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |

**Additional Information:**

This document covers only the 3M product. For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

This product contains titanium dioxide. Cancer of the lungs has been observed in rats that inhaled high levels of titanium dioxide. No exposure to inhaled titanium dioxide is expected during the normal handling and use of this product. Titanium dioxide was not detected when air sampling was conducted during simulated use of similar products containing titanium dioxide. Therefore, the health effects associated with titanium dioxide are not expected during the normal use of this product.

**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 |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg             |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 > 2.3 mg/l                                |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Ingestion                      | Rat     | LD50 > 5,000 mg/kg                             |
| Inorganic Fluoride  | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg             |
| Inorganic Fluoride  | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 > 5.3 mg/l                                |
| Inorganic Fluoride  | Ingestion                      | Rat     | LD50 5,854 mg/kg                               |
| Filler  | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg             |
| Filler  | Ingestion                      |         | LD50 estimated to be 2,000 - 5,000 mg/kg       |
| Filler  | Dermal                         | Rat     | LD50 > 2,000 mg/kg                             |
| Filler  | Inhalation-Dust/Mist           | Rat     | LC50 3 mg/l                                    |



|                    |                                |               |                     |
|--------------------|--------------------------------|---------------|---------------------|
|                    | (4 hours)                      |               |                     |
| Filler             | Ingestion                      | Rat           | LD50 6,450 mg/kg    |
| Inorganic Fluoride | Dermal                         | Rabbit        | LD50 > 2,100 mg/kg  |
| Inorganic Fluoride | Inhalation-Dust/Mist (4 hours) | Rat           | LC50 4.5 mg/l       |
| Inorganic Fluoride | Ingestion                      | Rat           | LD50 5,000 mg/kg    |
| Titanium Dioxide   | Dermal                         | Rabbit        | LD50 > 10,000 mg/kg |
| Titanium Dioxide   | Inhalation-Dust/Mist (4 hours) | Rat           | LC50 > 6.82 mg/l    |
| Titanium Dioxide   | Ingestion                      | Rat           | LD50 > 10,000 mg/kg |
| Pigment            | Dermal                         | Not available | LD50 3,100 mg/kg    |
| Pigment            | Ingestion                      | Not available | LD50 3,700 mg/kg    |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

| Name  | Species                 | Value                     |
|---|-------------------------|---------------------------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Rabbit                  | No significant irritation |
| Inorganic Fluoride  | Rabbit                  | No significant irritation |
| Filler  | Rabbit                  | No significant irritation |
| Inorganic Fluoride  | Multiple animal species | No significant irritation |
| Titanium Dioxide  | Rabbit                  | No significant irritation |
| Pigment   | Rabbit                  | No significant irritation |

**Serious Eye Damage/Irritation**

| Name  | Species | Value                     |
|---|---------|---------------------------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Rabbit  | No significant irritation |
| Inorganic Fluoride  | Rabbit  | No significant irritation |
| Filler  | Rabbit  | No significant irritation |
| Inorganic Fluoride  | Rabbit  | Mild irritant             |
| Titanium Dioxide  | Rabbit  | No significant irritation |
| Pigment   | Rabbit  | No significant irritation |

**Skin Sensitization**

| Name             | Species          | Value  |
|------------------|------------------|--|
| Titanium Dioxide | Human and animal | Not sensitizing  |
| Pigment          | Human            | Some positive data exist, but the data are not sufficient for classification |

**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         |
|---|----------|---------------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | In Vitro | Not mutagenic |
| Filler  | In Vitro | Not mutagenic |
| Titanium Dioxide  | In Vitro | Not mutagenic |
| Titanium Dioxide  | In vivo  | Not mutagenic |
| Pigment   | In Vitro | Not mutagenic |

**Carcinogenicity**

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

|   |            |                         |  |
|---|------------|-------------------------|--|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Inhalation | Rat                     | Not carcinogenic   |
| Titanium Dioxide  | Ingestion  | Multiple animal species | Not carcinogenic   |
| Titanium Dioxide  | Inhalation | Rat                     | Carcinogenic   |
| Pigment   | Inhalation | Human                   | 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              |
|--------|-----------|--------------------------|---------|---------------------|--------------------------------|
| Filler | Ingestion | Not toxic to development | Rat     | NOAEL 625 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 |
|--------|------------|--------------------|-----------------------|---------|------------------|-------------------|
| Filler | Inhalation | respiratory system | All data are negative | Rat     | NOAEL 0.812 mg/l | 90 minutes        |

**Specific Target Organ Toxicity - repeated exposure**

| Name  | Route      | Target Organ(s)                     | Value  | Species          | Test Result          | Exposure Duration     |
|---|------------|-------------------------------------|--|------------------|----------------------|-----------------------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Inhalation | pneumoconiosis   pulmonary fibrosis | Some positive data exist, but the data are not sufficient for classification | Human            | NOAEL Not available  | occupational exposure |
| Filler  | Inhalation | respiratory system                  | Some positive data exist, but the data are not sufficient for classification | Human            | NOAEL Not available  | occupational exposure |
| Filler  | Inhalation | pulmonary fibrosis                  | All data are negative  | Human and animal | NOAEL Not available  |                       |
| Filler  | Inhalation | respiratory system                  | Some positive data exist, but the data are not sufficient for classification | Human            | NOAEL Not available  | occupational exposure |
| Inorganic Fluoride  | Inhalation | bone, teeth, nails, and/or hair     | Causes damage to organs through prolonged or repeated exposure               | Rat              | NOAEL 0.0005 mg/l    | 5 months              |
| Inorganic Fluoride  | Inhalation | respiratory system                  | Causes damage to organs through prolonged or repeated exposure               | Rat              | NOAEL 0.00021 mg/l   | 90 days               |
| Inorganic Fluoride  | Ingestion  | bone, teeth, nails, and/or hair     | Causes damage to organs through prolonged or repeated exposure               | Rat              | LOAEL 0.58 mg/kg/day | 14 weeks              |
| Titanium Dioxide  | Inhalation | respiratory system                  | Some positive data exist, but the data are not sufficient for classification | Rat              | LOAEL 0.01 mg/l      | 2 years               |
| Titanium Dioxide  | Inhalation | pulmonary fibrosis                  | All data are negative  | Human            | NOAEL Not available  | occupational exposure |
| Pigment   | Inhalation | pulmonary fibrosis   pneumoconiosis | Some positive data exist, but the data are not sufficient for classification | 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.

The substrate that was abraded must be considered as a factor in the disposal method for this product. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include halogen acid (HCl/HF/HBr). Facility must be capable of handling halogenated materials.

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

## SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

## 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

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

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.

### HMIS Hazard Classification

Health: 0 Flammability: 1 Physical Hazard: 0 Personal Protection: X - See PPE section.

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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|------------------------|-----------|-------------------------|----------|
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| <b>Issue Date:</b>     | 03/28/17  | <b>Supersedes Date:</b> | 08/26/16 |

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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Abrasive Products, Trizact™ 953FA, 963FA A16-A500

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

##### Recommended use

Abrasive Product

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Abrasive Systems Division               |
| <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

#### 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.

50% of the mixture consists of ingredients of unknown acute oral toxicity.

### SECTION 3: Composition/information on ingredients

| Ingredient                           | C.A.S. No. | % by Wt     |
|--------------------------------------|------------|-------------|
| Ceramic Aluminum Oxide (non-fibrous) | 1344-28-1  | 15 - 30     |
| Filler                               | Mixture    | 5 - 20      |
| Filler                               | 1317-65-3  | 3 - 10      |
| Titanium Dioxide                     | 13463-67-7 | 0.01 - 0.4  |
| Quartz Silica                        | 14808-60-7 | 0.001 - 0.1 |
| Cured Resin                          | Mixture    | 20 - 55     |
| Cloth Backing                        | Mixture    | 20 - 35     |

### 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:**

No need for first aid is anticipated.

#### 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 special protective actions for fire-fighters are anticipated.

### SECTION 6: Accidental release measures

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

Observe precautions from other sections.

**6.2. Environmental precautions**

Not applicable.

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

Not applicable.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

For industrial or professional use only. Avoid breathing of dust created by sanding, grinding or machining. Damaged product can break apart during use and cause serious injury to face or eyes. Check product for damage such as cracks or nicks prior to use. Replace if damaged. Always wear eye and face protection when working at sanding or grinding operations or when near such operations. Combustible dust may form by action of this product on another material (substrate). Dust generated from the substrate during use of this product may be explosive if in sufficient concentration with an ignition source. Dust deposits should not be allowed to accumulate on surfaces because of the potential for secondary explosions.

**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**

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            |
|--------------------------------------|------------|--------|---|--------------------------------|
| Filler                               | 1317-65-3  | OSHA   | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3                              |                                |
| Aluminum, insoluble compounds        | 1344-28-1  | ACGIH  | TWA(respirable fraction):1 mg/m3  | A4: Not class. as human carcin |
| Ceramic Aluminum Oxide (non-fibrous) | 1344-28-1  | OSHA   | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3                              |                                |
| Titanium Dioxide                     | 13463-67-7 | ACGIH  | TWA:10 mg/m3  | A4: Not class. as human carcin |
| Titanium Dioxide                     | 13463-67-7 | OSHA   | TWA(as total dust):15 mg/m3   |                                |
| 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(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.);TWA:0.05 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

Provide appropriate local exhaust ventilation for sanding, grinding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Provide local exhaust at process emission sources to control exposure near the source and to prevent the escape of dust into the work area. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations. 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

Wear appropriate gloves to minimize risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

#### Respiratory protection

Assess exposure concentrations of all materials involved in the work process. Consider material being abraded when determining the appropriate respiratory protection. Select and use appropriate respirators to prevent inhalation overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

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

|  |                        |
|--|------------------------|
| <b>General Physical Form:</b>                  | Solid                  |
| <b>Odor, Color, Grade:</b>                     | Solid abrasive product |
| <b>Odor threshold</b>                          | <i>Not Applicable</i>  |
| <b>pH</b>                                      | <i>Not Applicable</i>  |
| <b>Melting point</b>                           | <i>Not Applicable</i>  |
| <b>Boiling Point</b>                           | <i>Not Applicable</i>  |
| <b>Flash Point</b>                             | <i>Not Applicable</i>  |
| <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>Specific Gravity</b>                        | <i>Not Applicable</i>  |
| <b>Solubility In Water</b>                     | <i>Not Applicable</i>  |
| <b>Solubility- non-water</b>                   | <i>Not Applicable</i>  |
| <b>Partition coefficient: n-octanol/ water</b> | <i>Not Applicable</i>  |



|                           |                       |
|---------------------------|-----------------------|
| Autoignition temperature  | <i>Not Applicable</i> |
| Decomposition temperature | <i>Not Applicable</i> |
| Viscosity                 | <i>Not Applicable</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.

### 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:

Dust from grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

#### Skin Contact:

Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

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

#### Eye Contact:

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**

No known health effects.

**Carcinogenicity:**

| Ingredient              | CAS No.    | Class Description              | Regulation                                  |
|-------------------------|------------|--------------------------------|---|
| SILICA, CRYSTAL AIRRESP | 14808-60-7 | Known human carcinogen         | National Toxicology Program Carcinogens     |
| Quartz Silica           | 14808-60-7 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| Titanium Dioxide        | 13463-67-7 | Grp. 2B: Possible human carc.  | International Agency for Research on Cancer |

**Additional Information:**

This document covers only the 3M product. For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

This product contains titanium dioxide and quartz (crystalline) silica. Cancer of the lungs has been associated with inhalation of high levels of titanium dioxide in animal studies, and occupational exposure to inhaled quartz silica has been associated with silicosis and lung cancer. No exposure to titanium dioxide or quartz silica is expected during the normal handling and use of this product. Titanium dioxide and quartz silica were not detected when air sampling was conducted during simulated use of similar products containing these substances. Therefore, the health effects associated with titanium dioxide and quartz (crystalline) silica are not expected during the normal use of this product.

**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 |
| Ceramic Aluminum Oxide (non-fibrous) | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg              |
| Ceramic Aluminum Oxide (non-fibrous) | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 > 2.3 mg/l                                 |
| Ceramic Aluminum Oxide (non-fibrous) | Ingestion                      | Rat     | LD50 > 5,000 mg/kg                              |
| Filler                               | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg              |
| Filler                               | Ingestion                      |         | LD50 estimated to be 2,000 - 5,000 mg/kg        |
| Filler                               | Dermal                         | Rat     | LD50 > 2,000 mg/kg                              |
| Filler                               | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 3 mg/l                                     |
| Filler                               | Ingestion                      | Rat     | LD50 6,450 mg/kg                                |
| Titanium Dioxide                     | Dermal                         | Rabbit  | LD50 > 10,000 mg/kg                             |
| Titanium Dioxide                     | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 > 6.82 mg/l                                |
| Titanium Dioxide                     | Ingestion                      | Rat     | LD50 > 10,000 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                     |
|--------------------------------------|-----------|---------------------------|
| Ceramic Aluminum Oxide (non-fibrous) | Rabbit    | No significant irritation |
| Filler                               | Rabbit    | No significant irritation |
| Titanium Dioxide                     | Rabbit    | No significant irritation |
| Quartz Silica                        | Professio | No significant irritation |

|  |                      |  |
|--|----------------------|--|
|  | nal<br>judgeme<br>nt |  |
|--|----------------------|--|

**Serious Eye Damage/Irritation**

| Name                                 | Species | Value                     |
|--------------------------------------|---------|---------------------------|
| Ceramic Aluminum Oxide (non-fibrous) | Rabbit  | No significant irritation |
| Filler                               | Rabbit  | No significant irritation |
| Titanium Dioxide                     | Rabbit  | No significant irritation |

**Skin Sensitization**

| Name             | Species                | Value           |
|------------------|------------------------|-----------------|
| Titanium Dioxide | Human<br>and<br>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  |
|--------------------------------------|----------|--|
| Ceramic Aluminum Oxide (non-fibrous) | In Vitro | Not mutagenic  |
| Filler                               | In Vitro | Not mutagenic  |
| Titanium Dioxide                     | In Vitro | Not mutagenic  |
| Titanium Dioxide                     | In vivo  | Not mutagenic  |
| 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            |
|--------------------------------------|------------|-------------------------|------------------|
| Ceramic Aluminum Oxide (non-fibrous) | Inhalation | Rat                     | Not carcinogenic |
| Titanium Dioxide                     | Ingestion  | Multiple animal species | Not carcinogenic |
| Titanium Dioxide                     | Inhalation | Rat                     | Carcinogenic     |
| Quartz Silica                        | Inhalation | Human and animal        | Carcinogenic     |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name   | Route     | Value                    | Species | Test Result         | Exposure Duration              |
|--------|-----------|--------------------------|---------|---------------------|--------------------------------|
| Filler | Ingestion | Not toxic to development | Rat     | NOAEL 625 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 |
|--------|------------|--------------------|-----------------------|---------|------------------|-------------------|
| Filler | Inhalation | respiratory system | All data are negative | Rat     | NOAEL 0.812 mg/l | 90 minutes        |

**Specific Target Organ Toxicity - repeated exposure**

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

|                                      |            |                                     |  |                  |                     | <b>Duration</b>       |
|--------------------------------------|------------|-------------------------------------|--|------------------|---------------------|-----------------------|
| Ceramic Aluminum Oxide (non-fibrous) | Inhalation | pneumoconiosis   pulmonary fibrosis | Some positive data exist, but the data are not sufficient for classification | Human            | NOAEL Not available | occupational exposure |
| Filler                               | Inhalation | respiratory system                  | Some positive data exist, but the data are not sufficient for classification | Human            | NOAEL Not available | occupational exposure |
| Filler                               | Inhalation | pulmonary fibrosis                  | All data are negative  | Human and animal | NOAEL Not available |                       |
| Filler                               | Inhalation | respiratory system                  | Some positive data exist, but the data are not sufficient for classification | Human            | NOAEL Not available | occupational exposure |
| Titanium Dioxide                     | Inhalation | respiratory system                  | Some positive data exist, but the data are not sufficient for classification | Rat              | LOAEL 0.01 mg/l     | 2 years               |
| Titanium Dioxide                     | Inhalation | pulmonary fibrosis                  | All data are negative  | 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.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. The substrate that was abraded must be considered as a factor in the disposal method for this product. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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**

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable

current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

## 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

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

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> | 18-8875-9 | <b>Version Number:</b>  | 4.09     |
| <b>Issue Date:</b>     | 08/26/16  | <b>Supersedes Date:</b> | 04/25/14 |

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## Safety Data Sheet

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|                        |           |                         |          |
|------------------------|-----------|-------------------------|----------|
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### SECTION 1: Identification

#### 1.1. Product identifier

3M™ Abrasive Products, 361F P24-P80, Roloc™, Belts

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

##### Recommended use

Abrasive Product

#### 1.3. Supplier's details

|                      |   |
|----------------------|---|
| <b>MANUFACTURER:</b> | 3M                                      |
| <b>DIVISION:</b>     | Abrasive Systems Division               |
| <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

#### 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.

37% of the mixture consists of ingredients of unknown acute oral toxicity.

### SECTION 3: Composition/information on ingredients

| Ingredient                           | C.A.S. No. | % by Wt     |
|--------------------------------------|------------|-------------|
| Aluminum Oxide Mineral (non-fibrous) | 1344-28-1  | 25 - 50     |
| Filler                               | 1317-65-3  | 10 - 30     |
| Titanium Dioxide                     | 13463-67-7 | 0.2 - 1.5   |
| Quartz Silica                        | 14808-60-7 | 0.001 - 0.5 |
| Cured Resin                          | Mixture    | 10 - 40     |
| Cloth Backing                        | Mixture    | 10 - 30     |
| Attachment Button                    | Mixture    | 0 - 5       |

### 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:**

No need for first aid is anticipated.

#### 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 special protective actions for fire-fighters are anticipated.

### SECTION 6: Accidental release measures



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

Observe precautions from other sections.

**6.2. Environmental precautions**

Not applicable.

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

Not applicable.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

For industrial or professional use only. Avoid breathing of dust created by sanding, grinding or machining. Damaged product can break apart during use and cause serious injury to face or eyes. Check product for damage such as cracks or nicks prior to use. Replace if damaged. Always wear eye and face protection when working at sanding or grinding operations or when near such operations. Combustible dust may form by action of this product on another material (substrate). Dust generated from the substrate during use of this product may be explosive if in sufficient concentration with an ignition source. Dust deposits should not be allowed to accumulate on surfaces because of the potential for secondary explosions.

**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**

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            |
|--------------------------------------|------------|--------|---|--------------------------------|
| Filler                               | 1317-65-3  | OSHA   | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3                              |                                |
| Aluminum, insoluble compounds        | 1344-28-1  | ACGIH  | TWA(respirable fraction):1 mg/m3  | A4: Not class. as human carcin |
| Aluminum Oxide Mineral (non-fibrous) | 1344-28-1  | OSHA   | TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3                              |                                |
| Titanium Dioxide                     | 13463-67-7 | ACGIH  | TWA:10 mg/m3  | A4: Not class. as human carcin |
| Titanium Dioxide                     | 13463-67-7 | OSHA   | TWA(as total dust):15 mg/m3   |                                |
| 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(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.);TWA:0.05 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

Provide appropriate local exhaust ventilation for sanding, grinding or machining. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment. Provide local exhaust at process emission sources to control exposure near the source and to prevent the escape of dust into the work area. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

### 8.2.2. Personal protective equipment (PPE)

#### Eye/face protection

To minimize the risk of injury to face and eyes, always wear eye and face protection when working at sanding or grinding operations or when near such operations. 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

Wear appropriate gloves to minimize risk of injury to skin from contact with dust or physical abrasion from grinding or sanding.

#### Respiratory protection

Assess exposure concentrations of all materials involved in the work process. Consider material being abraded when determining the appropriate respiratory protection. Select and use appropriate respirators to prevent inhalation overexposure. An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

## SECTION 9: Physical and chemical properties

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

|                                  |                        |
|----------------------------------|------------------------|
| <b>General Physical Form:</b>    | Solid                  |
| <b>Odor, Color, Grade:</b>       | Solid Abrasive Product |
| <b>Odor threshold</b>            | <i>Not Applicable</i>  |
| <b>pH</b>                        | <i>Not Applicable</i>  |
| <b>Melting point</b>             | <i>Not Applicable</i>  |
| <b>Boiling Point</b>             | <i>Not Applicable</i>  |
| <b>Flash Point</b>               | <i>Not Applicable</i>  |
| <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>                   | <i>Not Applicable</i>  |
| <b>Specific Gravity</b>          | <i>Not Applicable</i>  |
| <b>Solubility in Water</b>       | <i>Not Applicable</i>  |
| <b>Solubility- non-water</b>     | <i>Not Applicable</i>  |

|   |                |
|---|----------------|
| Solubility- non-water                   | Not Applicable |
| Partition coefficient: n-octanol/ water | Not Applicable |
| Autoignition temperature                | Not Applicable |
| Decomposition temperature               | Not Applicable |
| Viscosity                               | Not Applicable |

## 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.

### 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:

Dust from grinding, sanding or machining may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

#### Skin Contact:

Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

#### Eye Contact:

Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Ingestion:**

No known health effects.

**Carcinogenicity:**

| Ingredient            | CAS No.    | Class Description              | Regulation                                  |
|-----------------------|------------|--------------------------------|---|
| SILICA, CRYST AIRRESP | 14808-60-7 | Known human carcinogen         | National Toxicology Program Carcinogens     |
| Quartz Silica         | 14808-60-7 | Grp. 1: Carcinogenic to humans | International Agency for Research on Cancer |
| Titanium Dioxide      | 13463-67-7 | Grp. 2B: Possible human carc.  | International Agency for Research on Cancer |

**Additional Information:**

This document covers only the 3M product. For complete assessment, when determining the degree of hazard, the material being abraded must also be considered.

This product contains titanium dioxide and quartz (crystalline) silica. Cancer of the lungs has been associated with inhalation of high levels of titanium dioxide in animal studies, and occupational exposure to inhaled quartz silica has been associated with silicosis and lung cancer. No exposure to titanium dioxide or quartz silica is expected during the normal handling and use of this product. Titanium dioxide and quartz silica were not detected when air sampling was conducted during simulated use of similar products containing these substances. Therefore, the health effects associated with titanium dioxide and quartz (crystalline) silica are not expected during the normal use of this product.

**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 |
| Aluminum Oxide Mineral (non-fibrous) | Dermal                         |         | LD50 estimated to be > 5,000 mg/kg              |
| Aluminum Oxide Mineral (non-fibrous) | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 > 2.3 mg/l                                 |
| Aluminum Oxide Mineral (non-fibrous) | Ingestion                      | Rat     | LD50 > 5,000 mg/kg                              |
| Filler                               | Dermal                         | Rat     | LD50 > 2,000 mg/kg                              |
| Filler                               | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 3 mg/l                                     |
| Filler                               | Ingestion                      | Rat     | LD50 6,450 mg/kg                                |
| Titanium Dioxide                     | Dermal                         | Rabbit  | LD50 > 10,000 mg/kg                             |
| Titanium Dioxide                     | Inhalation-Dust/Mist (4 hours) | Rat     | LC50 > 6.82 mg/l                                |
| Titanium Dioxide                     | Ingestion                      | Rat     | LD50 > 10,000 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                     |
|--------------------------------------|------------------------|---------------------------|
| Aluminum Oxide Mineral (non-fibrous) | Rabbit                 | No significant irritation |
| Filler                               | Rabbit                 | No significant irritation |
| Titanium Dioxide                     | Rabbit                 | No significant irritation |
| Quartz Silica                        | Professional judgement | No significant irritation |

**Serious Eye Damage/Irritation**

| Name                                 | Species | Value                     |
|--------------------------------------|---------|---------------------------|
| Aluminum Oxide Mineral (non-fibrous) | Rabbit  | No significant irritation |
| Filler                               | Rabbit  | No significant irritation |
| Titanium Dioxide                     | Rabbit  | No significant irritation |

**Skin Sensitization**

| Name             | Species          | Value           |
|------------------|------------------|-----------------|
| Titanium Dioxide | 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  |
|--------------------------------------|----------|--|
| Aluminum Oxide Mineral (non-fibrous) | In Vitro | Not mutagenic  |
| Titanium Dioxide                     | In Vitro | Not mutagenic  |
| Titanium Dioxide                     | In vivo  | Not mutagenic  |
| 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            |
|--------------------------------------|------------|-------------------------|------------------|
| Aluminum Oxide Mineral (non-fibrous) | Inhalation | Rat                     | Not carcinogenic |
| Titanium Dioxide                     | Ingestion  | Multiple animal species | Not carcinogenic |
| Titanium Dioxide                     | Inhalation | Rat                     | Carcinogenic     |
| Quartz Silica                        | Inhalation | Human and animal        | Carcinogenic     |

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

| Name   | Route     | Value                    | Species | Test Result         | Exposure Duration              |
|--------|-----------|--------------------------|---------|---------------------|--------------------------------|
| Filler | Ingestion | Not toxic to development | Rat     | NOAEL 625 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 |
|--------|------------|--------------------|-----------------------|---------|------------------|-------------------|
| Filler | Inhalation | respiratory system | All data are negative | Rat     | NOAEL 0.812 mg/l | 90 minutes        |

**Specific Target Organ Toxicity - repeated exposure**

| Name                                 | Route      | Target Organ(s)                     | Value  | Species | Test Result         | Exposure Duration     |
|--------------------------------------|------------|-------------------------------------|--|---------|---------------------|-----------------------|
| Aluminum Oxide Mineral (non-fibrous) | Inhalation | pneumoconiosis   pulmonary fibrosis | Some positive data exist, but the data are not sufficient for classification | Human   | NOAEL Not available | occupational exposure |
| Filler                               | Inhalation | respiratory system                  | Some positive data exist, but the  | Human   | NOAEL Not           | occupational          |

|                  |            |                    |  |       |                     |                       |
|------------------|------------|--------------------|--|-------|---------------------|-----------------------|
|                  |            |                    | data are not sufficient for classification                                   |       | available           | exposure              |
| Titanium Dioxide | Inhalation | respiratory system | Some positive data exist, but the data are not sufficient for classification | Rat   | LOAEL 0.01 mg/l     | 2 years               |
| Titanium Dioxide | Inhalation | pulmonary fibrosis | All data are negative  | 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.

Prior to disposal, consult all applicable authorities and regulations to insure proper classification. The substrate that was abraded must be considered as a factor in the disposal method for this product. Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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**

Not regulated per U.S. DOT, IATA or IMO.

These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

**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**

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements.

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.

**HMIS Hazard Classification**

**Health: 0 Flammability: 1 Physical Hazard: 0 Personal Protection: X - See PPE section.**

Hazardous Material Identification System (HMIS® IV) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations. HMIS® IV ratings are to be used with a fully implemented HMIS® IV program. HMIS® is a registered mark of the American Coatings Association (ACA).

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