



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Canadian Hazardous Products Regulations.

SECTION 1: Identification

1.1. Product identifier

3M™ Abrasive Products, 384F 36+ - 240+

Product Identification Numbers

| | | | | |
|----------------|----------------|----------------|----------------|----------------|
| 44-0047-5849-4 | 44-0047-5912-0 | 60-0003-5410-4 | 60-0003-5411-2 | 60-0003-5412-0 |
| 60-0003-5413-8 | 60-0003-5414-6 | 60-0003-5415-3 | 60-0003-5416-1 | 60-0003-5417-9 |
| 60-0003-5418-7 | 60-0003-5419-5 | 60-0003-5420-3 | 60-0003-5421-1 | 60-0003-5422-9 |
| 60-0003-5516-8 | 60-0003-5539-0 | 60-0003-5540-8 | 60-0003-5542-4 | 60-0003-5543-2 |
| 60-0003-5544-0 | 60-0003-5545-7 | 60-0003-5546-5 | 60-0003-5547-3 | 60-0003-6236-2 |
| 60-0003-6254-5 | 60-4403-1056-7 | 60-4403-1057-5 | 60-4403-1058-3 | 60-4403-1059-1 |
| 60-4403-1060-9 | 60-4403-1061-7 | 60-4403-1062-5 | 60-4403-1063-3 | 60-4403-1064-1 |
| 60-4403-1065-8 | 60-4403-1066-6 | 60-4403-1067-4 | 60-4403-1068-2 | 60-4403-1069-0 |
| 60-4403-1070-8 | 60-4403-1071-6 | 60-4403-1072-4 | 60-4403-1073-2 | 60-4403-1074-0 |
| 60-4403-1075-7 | 60-4403-1076-5 | 60-4403-1077-3 | 60-4403-1605-1 | 60-4403-1685-3 |
| 60-4403-1686-1 | 60-4403-1768-7 | 60-4403-1770-3 | 60-4403-1771-1 | 60-4403-1772-9 |
| 60-4403-2042-6 | 60-4403-2043-4 | 60-4403-2052-5 | 60-4403-2053-3 | 60-4403-2111-9 |
| 60-4403-2148-1 | 60-4403-2427-9 | 60-4403-2459-2 | 60-4403-2460-0 | 60-4403-3228-0 |
| 60-4403-3229-8 | 60-4403-3230-6 | 60-4403-3231-4 | 60-4403-3232-2 | 60-4403-3233-0 |
| 60-4403-3234-8 | 60-4403-3235-5 | 60-4403-3236-3 | 60-4403-3237-1 | 60-4403-3238-9 |
| 60-4403-3239-7 | 60-4403-3240-5 | 60-4403-3241-3 | 60-4403-3242-1 | 60-4403-3243-9 |
| 60-4403-3475-7 | 60-4403-3476-5 | 60-4403-3477-3 | 60-4403-3479-9 | 60-4403-3480-7 |
| 60-4403-3481-5 | 60-4403-3482-3 | 60-4403-3483-1 | 60-4403-3485-6 | 60-4403-3486-4 |
| 60-4403-3487-2 | 60-4403-3488-0 | 60-4403-3489-8 | 60-4403-4732-0 | 60-4403-4733-8 |
| 60-4403-4734-6 | 60-4403-4735-3 | 60-4403-4736-1 | 60-4403-4737-9 | 60-4403-4738-7 |
| 60-4403-4739-5 | 60-4403-4740-3 | 60-4403-4741-1 | 60-4403-4742-9 | 60-4403-4743-7 |
| 60-4403-4744-5 | 60-4403-4745-2 | 60-4403-4746-0 | 60-4403-4747-8 | 60-4403-4748-6 |
| 60-4403-4749-4 | 60-4403-4750-2 | 60-4403-4751-0 | 60-4403-4752-8 | 60-4403-4753-6 |
| 60-4403-4754-4 | 60-4403-4755-1 | 60-4403-4756-9 | 60-4403-4757-7 | 60-4403-4758-5 |
| 60-4403-4759-3 | 60-4403-4760-1 | 60-4403-4761-9 | 60-4403-4762-7 | 60-4403-4763-5 |
| 60-4403-4764-3 | 60-4403-4765-0 | 60-4403-4766-8 | 60-4403-4767-6 | 60-4403-4768-4 |
| 60-4403-4769-2 | 60-4403-4770-0 | 60-4403-4771-8 | 60-4403-4772-6 | 60-4403-4773-4 |
| 60-4403-4774-2 | 60-4403-4775-9 | 60-4403-4776-7 | 60-4403-4777-5 | 60-4403-4778-3 |
| 60-4403-4779-1 | 60-4403-4780-9 | 60-4403-4781-7 | 60-4403-4782-5 | 60-4403-4783-3 |
| 60-4403-4784-1 | 60-4403-4785-8 | 60-4403-4786-6 | 60-4403-5230-4 | 60-4403-5231-2 |
| 60-4403-5232-0 | 60-4403-5233-8 | 60-4403-6466-3 | 60-4403-6467-1 | 60-4403-6468-9 |
| 60-4403-6469-7 | 60-4403-6470-5 | 60-4403-6471-3 | 60-4403-6472-1 | 60-4403-6473-9 |
| 60-4403-6474-7 | 60-4403-6475-4 | 60-4403-6476-2 | 60-4403-6477-0 | 60-4403-6478-8 |
| 60-4403-6479-6 | 60-4403-6480-4 | 60-4403-6481-2 | 60-4403-6482-0 | 60-4403-6483-8 |

| | | | | |
|----------------|----------------|----------------|----------------|----------------|
| 60-4403-6484-6 | 60-4403-6485-3 | 60-4403-6486-1 | 60-4403-6487-9 | 60-4403-9743-2 |
| 60-4404-0264-6 | 60-4404-0269-5 | 60-4404-0270-3 | 60-4404-0322-2 | 60-4404-0405-5 |
| 60-4404-0532-6 | 60-4404-0533-4 | 60-4404-0534-2 | 60-4404-0553-2 | 60-4404-0554-0 |
| 60-4404-0604-3 | 60-4404-0841-1 | 60-4404-0860-1 | 60-4404-0861-9 | 60-4404-0938-5 |
| 60-4404-0939-3 | 60-4404-0940-1 | 60-4404-0962-5 | 60-4404-0963-3 | 60-4404-0964-1 |
| 60-4404-0965-8 | 60-4404-0966-6 | 60-4404-0967-4 | 60-4404-0968-2 | 60-4404-0969-0 |
| 60-4404-0970-8 | 60-4404-1037-5 | 60-4404-1038-3 | 60-4404-1039-1 | 60-4404-1040-9 |
| 60-4404-1041-7 | 60-4404-1042-5 | 60-4404-1044-1 | 60-4404-1045-8 | 60-4404-1046-6 |
| 60-4404-1047-4 | 60-4404-1049-0 | 60-4404-1257-9 | 60-4404-1258-7 | 60-4406-1386-1 |
| CY-9986-0139-7 | CY-9986-0160-3 | CY-9986-0192-6 | CY-9986-0239-5 | CY-9987-7570-4 |
| CY-9987-7577-9 | CY-9987-7596-9 | CY-9987-7642-1 | CY-9987-7729-6 | CY-9987-7774-2 |
| CY-9987-7973-0 | CY-9987-7975-5 | CY-9987-8003-5 | CY-9987-8050-6 | CY-9987-8059-7 |
| CY-9987-8082-9 | CY-9988-3730-6 | CY-9988-3784-3 | CY-9988-3816-3 | CY-9988-3910-4 |
| CY-9988-4039-1 | CY-9988-4496-3 | CY-9988-4977-2 | CY-9988-5331-1 | CY-9988-5477-2 |
| CY-9988-5523-3 | CY-9988-6259-3 | CY-9988-6274-2 | CY-9988-6585-1 | CY-9988-6624-8 |
| CY-9988-6798-0 | CY-9988-7047-1 | CY-9988-8497-7 | CY-9988-8672-5 | HB-0044-8798-7 |
| HB-0044-8799-5 | HB-0044-8800-1 | HB-0044-8801-9 | HB-0044-8802-7 | HB-0044-8803-5 |
| HB-0044-8804-3 | HB-0044-8805-0 | HB-0044-8819-1 | HB-0044-8820-9 | HB-0044-8821-7 |
| HB-0044-8822-5 | HB-0044-8823-3 | HB-0044-8824-1 | HB-0044-8825-8 | HB-0044-8826-6 |
| HB-0045-2443-3 | HB-0046-0930-9 | HB-0046-0931-7 | UU-0092-5165-1 | UU-0092-5417-6 |
| UU-0092-5418-4 | UU-0100-4215-6 | UU-0100-4218-0 | UU-0102-6285-3 | UU-0104-8585-0 |
| UU-0104-8586-8 | UU-0108-4824-8 | UU-0108-4839-6 | UU-0108-4840-4 | UU-0112-5292-9 |
| UU-0112-5293-7 | UU-0112-5294-5 | UU-0115-6663-3 | | |

1.2. Recommended use and restrictions on use

Intended Use

Abrasive Product

Specific Use

For industrial/occupational use only. Not for consumer sale or use.

Restrictions on use

Not applicable

1.3. Supplier's details

Company: 3M Canada Company
Division: Abrasive Systems Division
Address: 1840 Oxford Street East, Post Office Box 5757, London, Ontario N6A 4T1
Telephone: (800) 364-3577
Website: www.3M.ca

1.4. Emergency telephone number

Medical Emergency Telephone: 1-800-3M HELPS / 1-800-364-3577; Transportation Emergency Telephone (CANUTEC): (613) 996-6666

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Not classified according to the Canadian Hazardous Products Regulation.

2.2. Label elements

Signal word

Not applicable.

Symbols

Not applicable.

Pictograms

Not applicable.

2.3. Other hazards

None known.

17% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | C.A.S. No. | % by Wt | Common Name |
|---|------------|---------|--|
| PET Backing | Mixture | 25 - 75 | Not Applicable |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1 | 10 - 45 | Aluminum oxide (non-fibrous) |
| Cured Resin | Mixture | 5 - 20 | Not Applicable |
| Inorganic Fluoride | 13775-53-6 | 4 - 20 | No Data Available |
| Filler 1 | 1317-65-3 | < 10 | Limestonests primarily of calcium carbonate. |
| Filler 2 | 13983-17-0 | < 10 | Wollastonite (Ca(SiO3)) |
| Titanium Dioxide | 13463-67-7 | < 2.5 | Titanium oxide (TiO2) |
| Quartz Silica | 14808-60-7 | < 0.3 | Quartz (SiO2) |

PET Backing is a non-hazardous Trade Secret material according to WHMIS criteria.

Cured Resin is a non-hazardous Trade Secret material according to WHMIS criteria.

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:

Do not induce vomiting. Rinse mouth. If you feel unwell, get medical attention.

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

No critical symptoms or effects. 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

Exposure to extreme heat can give rise to thermal decomposition.

Hazardous Decomposition or By-Products**Substance**

Carbon monoxide

Carbon dioxide

Hydrogen Fluoride

Condition

During Combustion

During Combustion

During Combustion

5.3. Special protective actions for fire-fighters

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

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

Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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. Not for consumer sale or use. 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. 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 |
|-------------------------------|-------------------|---------------|--|----------------------------|
| Aluminum, insoluble compounds | 1344-28-1 | ACGIH | TWA(respirable fraction):1 mg/m ³ | |
| Titanium Dioxide | 13463-67-7 | ACGIH | TWA(Respirable nanoscale particles):0.2 | |

| | | | |
|---------------|------------|-------|--|
| | | | mg/m ³ ;TWA(Respirable finescale particles):2.5 mg/m ³ |
| FLUORIDES | 13775-53-6 | ACGIH | TWA(as F):2.5 mg/m ³ |
| Filler 2 | 13983-17-0 | ACGIH | TWA(inhalable fraction):1 mg/m ³ |
| Quartz Silica | 14808-60-7 | ACGIH | TWA(respirable fraction):0.025 mg/m ³ |

ACGIH : American Conference of Governmental Industrial Hygienists
 AIHA : American Industrial Hygiene Association
 CMRG : Chemical Manufacturer's Recommended Guidelines
 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/vapours/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:

For those situations where the material might be exposed to extreme overheating due to misuse or equipment failure, use a positive pressure supplied-air respirator.

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

| | |
|---|--------------------------|
| Physical state | Solid |
| Colour | Red |
| Odour | Slight Polymeric |
| Odour threshold | <i>Not Applicable</i> |
| pH | <i>Not Applicable</i> |
| Melting point/Freezing point | <i>Not Applicable</i> |
| Boiling point | <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> |
| Vapour Pressure | <i>Not Applicable</i> |
| Vapour Density and/or Relative Vapour Density | <i>Not Applicable</i> |
| Density | <i>Not Applicable</i> |
| Relative density | <i>Not Applicable</i> |
| Water solubility | <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/Kinematic Viscosity | <i>Not Applicable</i> |
| Volatile Organic Compounds | <i>No Data Available</i> |
| Percent volatile | <i>No Data Available</i> |
| VOC Less H ₂ O & Exempt Solvents | <i>No Data Available</i> |
| Molecular weight | <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.

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:

No health effects are expected.

Carcinogenicity:

| Ingredient | CAS No. | Class Description | Regulation |
|---|------------|--------------------------------|---|
| Silica, Crystalline (Respirable Size) | 14808-60-7 | Known To Be Human Carcinogen. | National Toxicology Program Carcinogens |
| Silica dust, crystalline, in the form of quartz or cristobalite | 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 / 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 | Rat | LC50 > 2.3 mg/l |

| | | | |
|---|--------------------------------|--------|--|
| | (4 hours) | | |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Ingestion | Rat | LD50 > 5,000 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 |
| Filler 2 | Dermal | | LD50 estimated to be > 5,000 mg/kg |
| Filler 2 | Ingestion | | LD50 estimated to be 2,000 - 5,000 mg/kg |
| Filler 1 | Dermal | Rat | LD50 > 2,000 mg/kg |
| Filler 1 | Inhalation-Dust/Mist (4 hours) | Rat | LC50 3 mg/l |
| Filler 1 | 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 / Aluminum Oxide Mineral Blend (non-fibrous) | Rabbit | No significant irritation |
| Inorganic Fluoride | Multiple animal species | No significant irritation |
| Filler 1 | Rabbit | No significant irritation |
| Titanium Dioxide | Rabbit | No significant irritation |
| Quartz Silica | Professional judgement | 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 | Mild irritant |
| Filler 1 | Rabbit | No significant irritation |
| Titanium Dioxide | Rabbit | No significant irritation |

Skin Sensitization

| Name | Species | Value |
|------------------|------------------|----------------|
| Titanium Dioxide | Human and animal | Not classified |

Respiratory Sensitization

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

Germ Cell Mutagenicity

| Name | Route | Value |
|---|----------|---------------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | In Vitro | Not mutagenic |
| Filler 2 | 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 / Aluminum Oxide Mineral Blend (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 1 | Ingestion | Not classified for development | Rat | NOAEL 625 mg/kg/day | premating & during gestation |

Target Organ(s)

Specific Target Organ Toxicity - single exposure

| Name | Route | Target Organ(s) | Value | Species | Test result | Exposure Duration |
|----------|------------|--------------------|----------------|---------|------------------|-------------------|
| Filler 1 | Inhalation | respiratory system | Not classified | 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 | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | Inhalation | pulmonary fibrosis | Not classified | 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 |
| Filler 2 | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Filler 2 | Inhalation | pulmonary fibrosis | Not classified | Human and animal | NOAEL Not available | |
| Filler 1 | Inhalation | respiratory system | Not classified | 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 | Not classified | 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

No data available.

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. Combustion products will include HF. Facility must be capable of handling halogenated materials.

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. Safety, health and environmental regulations/legislation specific for the substance or mixture****Global inventory status**

Contact 3M for more information.

SECTION 16: Other information

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.

Health: 3 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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3M Canada SDSs are available at www.3M.ca