# 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, 341D Belts

**1.2. Recommended use and restrictions on use**

**Intended Use**
Abrasive Product

**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 / 1800 364 3577

## 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.

24% 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 |
|---|---|---|---|
| Cloth Backing | None | 5 - 60 | Not Applicable |
| Aluminum Oxide Mineral (non-fibrous) | 1344-28-1 | 25 - 50 | Aluminum oxide (non-fibrous) |
| Cured Resin | Mixture | 10 - 25 | Not Applicable |
| Filler | 13983-17-0 | 5 - 15 | Wollastonite (Ca(SiO3)) |
| Inorganic Fluoride | 15096-52-3 | 2 - 15 | Cryolite (Na3(AlF6)) |
| Filler | 1317-65-3 | 0.1 - 10 | Limestonests primarily of calcium carbonate. |
| Titanium Dioxide | 13463-67-7 | 0.5 - 2 | Titanium oxide (TiO2) |

Cloth Backing is a non-hazardous material according to WHMIS criteria. Specific information has been withheld as a trade secret.
Cured Resin is a non-hazardous material according to WHMIS criteria. Specific information has been withheld as a trade secret.

## SECTION 4: First aid measures

**4.1. Description of first aid measures**

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

**Skin Contact:**
Wash with soap and water. If signs/symptoms develop, get medical attention.

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

**If Swallowed:**
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. Unsuitable extinguishing media**
None Determined

**5.3. Special hazards arising from the substance or mixture**
Exposure to extreme heat can give rise to thermal decomposition.

**Hazardous Decomposition or By-Products**

| Substance | Condition |
|---|---|
| Carbon monoxide | During Combustion |
| Carbon dioxide | During Combustion |
| Hydrogen Fluoride | During Combustion |

**5.4. Special protection 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**
Use personal protective equipment based on the results of an exposure assessment. Refer to Section 8 for PPE recommendations. If anticipated exposure resulting from an accidental release exceeds the protective capabilities of the PPE listed in Section 8, or are unknown, select PPE that offers an appropriate level of protection. Consider the physical and chemical hazards of the material when doing so. Examples of PPE ensembles for emergency response could include wearing bunker gear for a release of flammable material; wearing chemical protective clothing if the spilled material is a corrosive, a sensitizer, a significant dermal irritant, or can be absorbed through the skin; or donning a positive pressure supplied-air respirator for chemicals with inhalation hazards. For information regarding physical and health hazards, refer to sections 2 and 11 of the SDS. 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. Not for consumer sale or use. Do not use in a confined area with minimal air exchange. 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/m3 | |

| | | | | |
|---|---|---|---|---|
| Titanium Dioxide | 13463-67-7 | ACGIH | TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3 | |
| Filler | 13983-17-0 | ACGIH | TWA(inhalable fraction):1 mg/m3 | |
| Aluminum, insoluble compounds | 15096-52-3 | ACGIH | TWA(respirable fraction):1 mg/m3 | |
| FLUORIDES | 15096-52-3 | ACGIH | 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
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:
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** | Violet |
| **Odour** | Slight Resinous |
| **Odour threshold** | *Not Applicable* |
| **pH** | *Not Applicable* |
| **Melting point/Freezing point** | *Not Applicable* |
| **Boiling point** | *Not Applicable* |
| **Flash Point** | *Not Applicable* |
| **Evaporation rate** | *Not Applicable* |
| **Flammability** | Not Applicable |
| **Flammable Limits(LEL)** | *Not Applicable* |
| **Flammable Limits(UEL)** | *Not Applicable* |
| **Vapour Pressure** | *Not Applicable* |
| **Relative Vapour Density** | *Not Applicable* |
| **Density** | *Not Applicable* |
| **Relative density** | *Not Applicable* |
| **Water solubility** | *Not Applicable* |
| **Solubility- non-water** | *Not Applicable* |
| **Partition coefficient: n-octanol/ water** | *Not Applicable* |
| **Autoignition temperature** | *Not Applicable* |
| **Decomposition temperature** | *Not Applicable* |
| **Kinematic Viscosity** | *Not Applicable* |
| **Volatile Organic Compounds** | *Not Applicable* |
| **Percent volatile as Text** | *Not Applicable* |
| **VOC Less H2O & Exempt Solvents** | *Not Applicable* |

| | |
|---|---|
| **Particle Characteristics** | *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**

| **Substance** | **Condition** |
|---|---|
| None known. | |

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:**
No health effects are expected.

**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 completeassessment, 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 |
| 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 | Ingestion | Rat | LD50 > 5,000 mg/kg |

| | | | |
|---|---|---|---|
| Filler | Dermal | similar compounds | LD50 > 5,000 mg/kg |
| Filler | Inhalation-Dust/Mist (4 hours) | similar compounds | LC50 > 2.08 mg/l |
| 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 |
| 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 |

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

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

**Serious Eye Damage/Irritation**

| Name | Species | Value |
|---|---|---|
| Aluminum Oxide Mineral (non-fibrous) | Rabbit | No significant irritation |
| Filler | similar compounds | Mild irritant |
| Inorganic Fluoride | Rabbit | Mild irritant |
| Titanium Dioxide | Rabbit | No significant irritation |
| Filler | Rabbit | No significant irritation |

**Skin Sensitization**

| Name | Species | Value |
|---|---|---|
| Filler | Human | Not classified |
| 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 |
|---|---|---|
| Aluminum Oxide Mineral (non-fibrous) | In Vitro | Not mutagenic |
| Filler | In Vitro | Not mutagenic |
| Filler | In vivo | Not mutagenic |

| | | |
|---|---|---|
| Titanium Dioxide | In Vitro | Not mutagenic |
| Titanium Dioxide | In vivo | Not mutagenic |

**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 |

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

| Name | Route | Value | Species | Test result | Exposure Duration |
|---|---|---|---|---|---|
| Filler | Ingestion | Not classified for development | Multiple animal species | NOAEL 1,600 mg/kg/day | during organogenesis |
| Filler | 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 | 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 |
|---|---|---|---|---|---|---|
| Aluminum Oxide Mineral (non-fibrous) | Inhalation | pneumoconiosis | Some positive data exist, but the data are not sufficient for classification | Human | NOAEL Not available | occupational exposure |
| Aluminum Oxide Mineral (non-fibrous) | Inhalation | pulmonary fibrosis | Not classified | Human | NOAEL Not available | occupational exposure |
| Filler | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Filler | Inhalation | pulmonary fibrosis | Not classified | Human and animal | NOAEL Not available | |
| Filler | Ingestion | liver \| kidney and/or bladder \| hematopoietic system | Not classified | Rat | NOAEL 2,500 mg/kg/day | 2 years |
| 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 | Not classified | Human | NOAEL Not available | occupational exposure |
| Filler | Inhalation | respiratory system | Not classified | 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. Proper destruction may require the use of additional fuel during incineration processes. Combustion products will include HF. Facility must be capable of handling halogenated materials.

## 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's transportation classifications are based on product formulation, packaging, 3M policies and 3M's 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 Canadian 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. 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:** 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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**3M Canada SDSs are available at www.3M.ca**