



Safety Data Sheet

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Document Group: 20-7972-1 **Version Number:** 3.00
Issue Date: 04/03/24 **Supersedes Date:** 03/25/14

SECTION 1: Identification

1.1. Product identifier

3M™ Abrasive Products, Depressed Center Wheels, Aluminum Oxide

1.2. Recommended use and restrictions on use

Recommended use

Abrasive Product

1.3. Supplier's details

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

1.4. Emergency telephone number

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

SECTION 2: Hazard identification

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.

SECTION 3: Composition/information on ingredients

| Ingredient | C.A.S. No. | % by Wt |
|--------------------------------------|------------|---------|
| Aluminum Oxide Mineral (non-fibrous) | 1344-28-1 | 65 - 75 |
| Cured Resin | Mixture | 10 - 20 |

| | | |
|--------------------|------------|---------|
| Glass Fiber Cloth | Mixture | 10 - 20 |
| Inorganic Fluoride | 15096-52-3 | 1 - 5 |
| Metal Ring | Mixture | 1 - 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:

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

Condition

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/occupational 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 Oxide Mineral (non-fibrous) | 1344-28-1 | OSHA | TWA(as total dust):15 mg/m ³ ;TWA(respirable fraction):5 mg/m ³ | |
| Aluminum, insoluble compounds | 1344-28-1 | ACGIH | TWA(respirable fraction):1 mg/m ³ | A4: Not class. as human carcin |
| Aluminum, insoluble compounds | 15096-52-3 | ACGIH | TWA(respirable fraction):1 mg/m ³ | A4: Not class. as human carcin |
| FLUORIDES | 15096-52-3 | ACGIH | TWA(as F):2.5 mg/m ³ | A4: Not class. as human carcin |
| FLUORIDES | 15096-52-3 | OSHA | TWA(as F):2.5 mg/m ³ ;TWA(as dust):2.5 mg/m ³ | |

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:

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****Appearance****Physical state**

Solid

Color

Light Brown

Odor

Slight Polymeric

Odor threshold*Not Applicable***pH***Not Applicable***Melting point***Not Applicable***Boiling Point***Not Applicable***Flash Point***Not Applicable***Evaporation rate***Not Applicable***Flammability (solid, gas)**

Not Classified

Flammable Limits(LEL)*Not Applicable***Flammable Limits(UEL)***Not Applicable***Vapor Pressure***Not Applicable***Vapor Density***Not Applicable***Density***Not Applicable***Specific Gravity***Not Applicable***Solubility In Water***Not Applicable***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> |
|-------------------|--------------------------|
| Hydrogen Fluoride | At Elevated Temperatures |

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.

Additional Information:

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

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 |
| 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 |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

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

Serious Eye Damage/Irritation

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

Skin Sensitization

For the component/components, either no data are currently available or 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 |
|--------------------------------------|----------|---------------|
| Aluminum Oxide Mineral (non-fibrous) | In Vitro | Not mutagenic |

Carcinogenicity

| Name | Route | Species | Value |
|--------------------------------------|------------|---------|------------------|
| Aluminum Oxide Mineral (non-fibrous) | Inhalation | Rat | Not carcinogenic |

Reproductive Toxicity

Reproductive and/or Developmental Effects

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

Target Organ(s)

Specific Target Organ Toxicity - single exposure

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

Specific Target Organ Toxicity - repeated exposure

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

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 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 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.

EPCRA 311/312 Hazard Classifications:

Physical Hazards

Not applicable

Health Hazards

Not applicable

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: 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.

The NFPA Health code of 3 is due to emergency situations where the material may thermally decompose and release Hydrogen Fluoride. During normal use conditions, please reference Section 2 and Section 11 of the SDS for additional health hazard information.

Document Group: 20-7972-1

Version Number: 3.00

Issue Date: 04/03/24

Supersedes Date: 03/25/14

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