



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the GHS guidelines & India Hazardous substances (Classification, Labeling & Packaging) Draft Rules 2011.

SECTION 1: Identification

1.1. Product identifier

3M™ Abrasive Products, Cubitron™ 3 Cut-Off Wheels

Product Identification Numbers

| | | | | |
|----------------|----------------|----------------|----------------|----------------|
| 60-4406-1340-8 | 60-4406-1341-6 | 60-4406-1342-4 | 60-4406-1343-2 | 60-4406-1397-8 |
| 60-4406-1398-6 | UU-0121-0589-4 | UU-0121-0590-2 | UU-0121-0641-3 | UU-0121-0642-1 |
| UU-0121-0643-9 | UU-0121-0644-7 | UU-0121-0645-4 | XC-9919-6844-4 | XC-9919-6845-1 |
| XC-9919-6846-9 | XC-9919-6847-7 | XC-9919-6851-9 | XC-9919-6854-3 | XC-9919-6855-0 |
| XC-9919-6856-8 | | | | |

1.2. Recommended use and restrictions on use

Recommended use

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

1.3. Supplier's details

Address: 3M India Limited, plot-48-51, Electronic city, Hosur road, Bangalore-560100
Telephone: 080-45543000, contact Product EHS team
E Mail: productehs.in@mmm.com
Website: <http://solutions.3mindia.co.in>

1.4. Emergency telephone number

080-45543000 (Contact hours: 8:00 AM to 5:00 PM)

SECTION 2: Hazard identification

Under MSIHC Rules, information is noted below on flammability, acute toxicity and explosivity relevant to this product. In line with international standards, information on other hazard classes and associated precautionary statements relevant to this product are included as well.

2.1. Classification of the substance or mixture

Not classified as hazardous according to UN GHS criteria.

2.2. Label elements

Signal Word

Not applicable.

Symbols

Not applicable

Pictograms

Not applicable

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

| Ingredient | CAS Nbr | % by Wt |
|---|----------------|----------------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1 | 40 - 70 |
| Inorganic Fluoride | 60304-36-1 | 10 - 20 |
| Cured resin | Mixture | 10 - 20 |
| Fiberglass Mesh Scrims | Mixture | 4 - 18 |
| Metal Reinforced Steel Bushing | Mixture | 0.5 - 5 |
| Filler | 13983-17-0 | 1 - 5 |
| Paper Label | Mixture | 0.1 - 2 |
| Titanium dioxide | 13463-67-7 | < 0.5 |
| Aluminum Cobalt Oxide | 12672-27-4 | < 0.2 |

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**

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**

Avoid inhalation of thermal decomposition products. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial/occupational use only. Not for consumer sale or use. 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 | CAS Nbr | Agency | Limit type | Additional comments |
|-------------------------------|----------------|---------------|--|--|
| Aluminum, insoluble compounds | 12672-27-4 | ACGIH | TWA(respirable fraction):1 mg/m ³ | A4: Not class. as human carcin |
| Cobalt, inorganic compounds | 12672-27-4 | ACGIH | TWA(as Co, inhalable fraction):0.02 mg/m ³ ;TWA(as Co):0.02 mg/m ³ | A3: Confirmed animal carcin., Dermal/Respiratory Sensitizer |
| Aluminum, insoluble compounds | 1344-28-1 | ACGIH | TWA(respirable fraction):1 mg/m ³ | A4: Not class. as human carcin |
| Titanium dioxide | 13463-67-7 | ACGIH | TWA(Respirable nanoscale particles):0.2 | A3: Confirmed animal carcin. |

| | | | | |
|-----------|------------|-------|--|--------------------------------|
| | | | mg/m ³ ;TWA(Respirable finescale particles):2.5 mg/m ³ | |
| Filler | 13983-17-0 | ACGIH | TWA(inhalable fraction):1 mg/m ³ | A4: Not class. as human carcin |
| Fluorides | 60304-36-1 | ACGIH | TWA(as F):2.5 mg/m ³ | A4: Not class. as human carcin |

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. 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 appropriate local exhaust ventilation for cutting, grinding, sanding or machining. Provide local exhaust at process emission sources to control exposure near the source and to prevent the escape of dust into the work area. It is recommended that all dust control equipment (such as local exhaust ventilation), process equipment, and material transport systems involved in handling of this product be evaluated for the need for explosion-protection safeguards. Recognized safeguards include explosion relief vents, explosion suppression systems, and oxygen deficient process environments.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

To minimise 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 minimise 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. |
| Color | Black |
| Odor | Slight Polymeric |
| Odour threshold | <i>Not applicable.</i> |
| pH | <i>Not applicable.</i> |
| Melting point/Freezing point: NA | <i>Not applicable.</i> |
| Boiling point/Initial boiling point/Boiling range | <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> |
| Vapor Density and/or Relative Vapor 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 (VOC) | <i>No data available.</i> |
| Percent volatile | <i>Not applicable.</i> |
| VOC less H ₂ O & exempt solvents | <i>No data available.</i> |
| Molecular weight | <i>No data available.</i> |

SECTION 10: Stability and reactivity

10.1 Reactivity

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

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation 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 labelling, 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 cutting, grinding, sanding or machining may cause irritation of the respiratory system: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, 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 cutting, 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 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 this product. Titanium dioxide was not detected when air sampling was conducted under simulated conditions on similar types of materials that contain 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 | Rabbit | LD50 > 2,000 mg/kg |
| Inorganic Fluoride | Inhalation-Dust/Mist (4 hours) | Rat | LC50 1.2 mg/l |
| Inorganic Fluoride | Ingestion | Rat | LD50 2,150 mg/kg |
| Filler | Dermal | | LD50 estimated to be > 5,000 mg/kg |

3M™ Abrasive Products, Cubitron™ 3 Cut-Off Wheels

| | | | |
|-----------------------|--------------------------------|------------------------|--|
| Filler | Ingestion | | LD50 estimated to be 2,000 - 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 |
| Aluminum Cobalt Oxide | Dermal | Professional judgement | LD50 estimated to be > 5,000 mg/kg |
| Aluminum Cobalt Oxide | Ingestion | Rat | LD50 > 2,000 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 | Rabbit | No significant irritation |
| Titanium dioxide | Rabbit | No significant irritation |
| Aluminum Cobalt Oxide | In vitro data | 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 | Corrosive |
| Titanium dioxide | Rabbit | No significant irritation |
| Aluminum Cobalt Oxide | In vitro data | No significant irritation |

Sensitization:**Skin Sensitisation**

| Name | Species | Value |
|-----------------------|-------------------|----------------|
| Titanium dioxide | Human and animal | Not classified |
| Aluminum Cobalt Oxide | similar compounds | Sensitising |

Respiratory Sensitisation

| Name | Species | Value |
|-----------------------|-------------------|-------------|
| Aluminum Cobalt Oxide | similar compounds | Sensitising |

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 |
| Aluminum Cobalt Oxide | In Vitro | Some positive data exist, but the data are not sufficient for classification |
| Aluminum Cobalt Oxide | In vivo | 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. |
| Aluminum Cobalt Oxide | Inhalation | similar compounds | Carcinogenic. |

Reproductive Toxicity

Reproductive and/or Developmental Effects

| Name | Route | Value | Species | Test result | Exposure Duration |
|-----------------------|------------|--------------------------------|-------------------|---------------------|----------------------|
| Inorganic Fluoride | Ingestion | Not classified for development | Mouse | NOAEL 100 mg/kg/day | during organogenesis |
| Aluminum Cobalt Oxide | Ingestion | Toxic to development | similar compounds | NOAEL 5 mg/kg/day | during gestation |
| Aluminum Cobalt Oxide | Ingestion | Toxic to male reproduction | similar compounds | NOAEL Not available | |
| Aluminum Cobalt Oxide | Inhalation | Toxic to male reproduction | similar compounds | NOAEL Not available | |

Lactation

| Name | Route | Species | Value |
|--------------------|-----------|---------|--|
| Inorganic Fluoride | Ingestion | Rat | Not classified for effects on or via lactation |

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 |
|---|------------|--------------------|--|-------------------|---------------------|-----------------------|
| 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 | respiratory system | Causes damage to organs through prolonged or repeated exposure | Rat | LOAEL 0.003 mg/l | 28 days |
| Filler | Inhalation | respiratory system | Not classified | Human | NOAEL Not available | occupational exposure |
| Filler | Inhalation | pulmonary fibrosis | Not classified | Human and animal | NOAEL Not available | |
| 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 |
| Aluminum Cobalt Oxide | Inhalation | respiratory system | Causes damage to organs through prolonged or repeated exposure | similar compounds | NOAEL Not available | 13 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

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity**Acute aquatic hazard:**

Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:

Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

| Material | CAS Nbr | Organism | Type | Exposure | Test endpoint | Test result |
|---|------------|-------------------|---|----------|--------------------------------|--------------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1 | N/A | Experimental | 96 hours | LC50 | >100 mg/l |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1 | Green algae | Experimental | 72 hours | EC50 | >100 mg/l |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1 | Water flea | Experimental | 48 hours | LC50 | >100 mg/l |
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1 | Green algae | Experimental | 72 hours | NOEC | >100 mg/l |
| Inorganic Fluoride | 60304-36-1 | Activated sludge | Experimental | 3 hours | EC50 | >75 mg/l |
| Inorganic Fluoride | 60304-36-1 | Water flea | Experimental | 48 hours | EC50 | 22.8 mg/l |
| Filler | 13983-17-0 | N/A | Data not available or insufficient for classification | N/A | N/A | N/A |
| Titanium dioxide | 13463-67-7 | Activated sludge | Experimental | 3 hours | NOEC | >=1,000 mg/l |
| Titanium dioxide | 13463-67-7 | Diatom | Experimental | 72 hours | EC50 | >10,000 mg/l |
| Titanium dioxide | 13463-67-7 | Fathead minnow | Experimental | 96 hours | LC50 | >100 mg/l |
| Titanium dioxide | 13463-67-7 | Water flea | Experimental | 48 hours | EC50 | >100 mg/l |
| Titanium dioxide | 13463-67-7 | Diatom | Experimental | 72 hours | NOEC | 5,600 mg/l |
| Aluminum Cobalt Oxide | 12672-27-4 | Ciliated protozoa | Estimated | 9 hours | IC50 | 112.34 mg/l |
| Aluminum Cobalt Oxide | 12672-27-4 | Green algae | Estimated | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminum Cobalt Oxide | 12672-27-4 | Rainbow trout | Estimated | 96 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminum Cobalt Oxide | 12672-27-4 | Water flea | Estimated | 48 hours | No tox obs at lmt of water sol | >100 mg/l |
| Aluminum Cobalt | 12672-27-4 | Green algae | Estimated | 72 hours | No tox obs at lmt | >100 mg/l |

| | | | | | | |
|-----------------------|------------|------------|-----------|---------|--------------------------------|-----------|
| Oxide | | | | | of water sol | |
| Aluminum Cobalt Oxide | 12672-27-4 | Water flea | Estimated | 7 days | No tox obs at lmt of water sol | >100 mg/l |
| Aluminum Cobalt Oxide | 12672-27-4 | Zebra Fish | Estimated | 16 days | No tox obs at lmt of water sol | >100 mg/l |

12.2. Persistence and degradability

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|------------|---------------------------------|----------|------------|-------------|----------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Inorganic Fluoride | 60304-36-1 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Filler | 13983-17-0 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Titanium dioxide | 13463-67-7 | Data not available-insufficient | N/A | N/A | N/A | N/A |
| Aluminum Cobalt Oxide | 12672-27-4 | Data not available-insufficient | N/A | N/A | N/A | N/A |

12.3 : Bioaccumulative potential

| Material | CAS Nbr | Test type | Duration | Study Type | Test result | Protocol |
|---|------------|---|----------|------------------------|-------------|----------|
| Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous) | 1344-28-1 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Inorganic Fluoride | 60304-36-1 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Filler | 13983-17-0 | Data not available or insufficient for classification | N/A | N/A | N/A | N/A |
| Titanium dioxide | 13463-67-7 | Experimental BCF - Fish | 42 days | Bioaccumulation factor | 9.6 | |
| Aluminum Cobalt Oxide | 12672-27-4 | Estimated BCF - Fish | 63 days | Bioaccumulation factor | 190 | |

12.4. Mobility in soil

Please contact manufacturer for more details

12.5 Other Adverse effects

No information available.

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. Combustion products will include HF. Facility must be capable of handling halogenated materials. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information

Not hazardous for transportation.

Air Transport (IATA) Regulations

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Marine Transport (IMDG)

UN No Not applicable

Proper Shipping Name Not applicable

Hazard Class/Division Not applicable

Subsidiary Risk Not applicable

Packing Group: Not applicable

Environmental Hazards: Not applicable

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.

Applicable Environmental, Health and Safety Regulations

The Manufacture, Storage and Import of Hazardous Chemical Rules, 1989

The following ingredients are listed as hazardous on Part II of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules

None.

The following ingredients are classified as hazardous based on the criteria listed under Part I of Schedule I of the India Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) rules:

Product is classified as Non Hazardous as per MSIHC Rules, 1989.

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.

Revision information:

No revision information

DISCLAIMER: The information in this Safety Data Sheet (SDS) is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this SDS or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own evaluation to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into India, you are responsible to comply with all applicable regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration/notification.

3M India SDSs are available at <http://solutions.3mindia.co.in>