

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, High Performance Cut off Wheels and Depressed Center Grinding Wheels; Cubitron[™] II Cut off Wheels and Depressed Center Grinding Wheels; Cubitron[™]II Cut and Grind Wheels Type 27; Silver Depressed Center Grinding Wheels Type 27

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 / 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.

22% 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
Ceramic Aluminum Oxide /	1344-28-1	60 - 100	Aluminum oxide (non-fibrous)
Aluminum Oxide Mineral Blend			
(non-fibrous)			
Inorganic Fluoride	60304-36-1	5 - 25	Aluminum potassium fluoride
Cured resin	Trade Secret	5 - 20	Not Applicable
Fiberglass Mesh Scrims	Mixture	5 - 10	Not Applicable
Metal Reinforced Steel Bushing	Mixture	1 - 5	Not Applicable
Titanium Dioxide	13463-67-7	0 - 2	Titanium oxide (TiO2)
Silicon Carbide Mineral	409-21-2	0 - 1	Silicon carbide (SiC)
Carbon Black	1333-86-4	0.01 - 0.4	Carbon black
Lubricant	8042-47-5	0 - 0.4	White mineral oil (petroleum)

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

Carbon black is inextricably bound in this product. Exposure to carbon black is not expected during product use

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

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

Skin Contact:

Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye Contact:

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

If Swallowed:

No need for first aid is anticipated.

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

See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable

SECTION 5: Fire-fighting measures

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5.1. Suitable extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

SubstanceConditionCarbon monoxideDuring CombustionCarbon dioxideDuring Combustion

5.3. Special protective actions for fire-fighters

Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

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 eye contact. Avoid breathing of dust created by cutting, sanding, grinding or machining. For industrial or professional 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. Sparks and particles flying from the product during sanding or grinding can cause injury and fire. 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
Carbon Black	1333-86-4	ACGIH	TWA(inhalable fraction):3 mg/m3	
Aluminum, insoluble compounds	1344-28-1	ACGIH	TWA(respirable fraction):1 mg/m3	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	
FLUORIDES	60304-36-1	ACGIH	TWA(as F):2.5 mg/m3	
MINERAL OILS, HIGHLY-	8042-47-5	ACGIH	TWA(inhalable fraction):5	

REFINED OILS 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

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. 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	Gray
Odour	Slight Polymeric
Odour threshold	Not Applicable
рН	Not Applicable
Melting point/Freezing 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

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Flammable Limits(UEL)	Not Applicable		
Vapour Pressure	Not Applicable		
Viscosity/Kinematic Viscosity Viscosity/Kinematic	Not Applicable		
Viscosity			
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		
Viscosity/Kinematic Viscosity	Not Applicable		
Volatile Organic Compounds			
Percent volatile	Not Applicable		
VOC Less H2O & Exempt Solvents			
Molecular weight	No Data Available		

Nanoparticles

This material contains nanoparticles.

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.

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

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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, 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 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.

Carcinogenicity:

Ingredient	CAS No.	Class Description	Regulation
Carbon Black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
Silicon Carbide Mineral	409-21-2	Grp. 2A: Probable human carc.	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. Cancer of the lungs has been observed in rats that inhaled high levels of titanium dioxide. No exposure to inhaled titanium dioxide is expected during the normal handling and use of this product. Titanium dioxide was not detected when air sampling was conducted during simulated use of similar products containing titanium dioxide. Therefore, the health effects associated with titanium dioxide are not expected during the normal use of this product.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Dermal		LD50 estimated to be > 5,000 mg/kg
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 2.3 mg/l
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Ingestion	Rat	LD50 > 5,000 mg/kg
Inorganic Fluoride	Dermal	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
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
Silicon Carbide Mineral	Dermal	Rat	LD50 > 2,000 mg/kg
Silicon Carbide Mineral	Ingestion	Rat	LD50 > 2,000 mg/kg
Carbon Black	Dermal	Rabbit	LD50 > 3,000 mg/kg

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Carbon Black	Ingestion	Rat	LD50 > 8,000 mg/kg
Lubricant	Dermal	Rabbit	LD50 > 2,000 mg/kg
Lubricant	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name		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
Silicon Carbide Mineral	Rat	No significant irritation
Carbon Black	Rabbit	No significant irritation
Lubricant	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Rabbit	No significant irritation
Inorganic Fluoride	Rabbit	Corrosive
Titanium Dioxide	Rabbit	No significant irritation
Silicon Carbide Mineral	Professio	No significant irritation
	nal	
	judgeme	
	nt	
Carbon Black	Rabbit	No significant irritation
Lubricant	Rabbit	Mild irritant

Skin Sensitization

Shiri Sensitization			
Name	Species	Value	
Titanium Dioxide	Human	Not classified	
	and		
	animal		
Lubricant	Guinea	Not classified	
	nig		

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
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Carbon Black	In Vitro	Not mutagenic
Carbon Black	In vivo	Some positive data exist, but the data are not
		sufficient for classification
Lubricant	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-	Inhalation	Rat	Not carcinogenic
fibrous)			-
Titanium Dioxide	Ingestion	Multiple	Not carcinogenic
		animal	_
		species	
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Carbon Black	Dermal	Mouse	Not carcinogenic
Carbon Black	Ingestion	Mouse	Not carcinogenic
Carbon Black	Inhalation	Rat	Carcinogenic
Lubricant	Dermal	Mouse	Not carcinogenic

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Lubricant	Inhalation	Multiple	Not carcinogenic
		animal	
		species	

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 organogenesi s
Lubricant	Ingestion	Not classified for female reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
Lubricant	Ingestion	Not classified for male reproduction	Rat	NOAEL 4,350 mg/kg/day	13 weeks
Lubricant	Ingestion	Not classified for development	Rat	NOAEL 4,350 mg/kg/day	during gestation

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
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
Carbon Black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
Lubricant	Ingestion	hematopoietic system	Not classified	Rat	NOAEL 1,381 mg/kg/day	90 days
Lubricant	Ingestion	liver immune system	Not classified	Rat	NOAEL 1,336 mg/kg/day	90 days

Aspiration Hazard

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	Name	Value	
	Lubricant	Aspiration hazard	

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	N 12: I	Ecological	l information
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No data 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. 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 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.

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The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. The manufacturer MAKES

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

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