

Safety Data Sheet

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Document group:	44-3853-7	Version number:	1.01
Issue Date:	18/02/2025	Supersedes date:	20/05/2024

This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier

3M[™] Abrasive Products, Cubitron[™] 3 Fibre Disc, 1182C, TN and GL Attachment, Slotted

Product Identification Numbers

60-4406-1307-7	60-4406-1308-5	60-4406-1309-3	60-4406-1311-9	60-4406-1601-3
60-4406-1602-1	60-4406-1603-9	60-4406-1605-4	60-4406-1615-3	60-4406-1616-1
60-4406-1617-9	60-4406-1619-5			

1.2. Recommended use and restrictions on use

Recommended use

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

For Industrial or Professional use only.

1.3. Supplier's details

Address:	3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone:	136 136
E Mail:	productinfo.au@mmm.com
Website:	www.3m.com.au

1.4. Emergency telephone number

EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is NOT classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture

Not applicable.

2.2. Label elements

Signal word Not applicable.

Symbols Not applicable.

Pictograms Not applicable

2.3. Other assigned/identified product hazards None known.

2.4. Other hazards which do not result in classification

Harmful to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight	
Fibre Backing	Mixture	40 - 55	
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	1344-28-1	15 - 25	
Inorganic Fluoride 1	13775-53-6	10 - 20	
Cured resin	Mixture	5 - 15	
Steel or Plastic Attachment	Mixture	<= 5	
Inorganic Fluoride 2	7789-75-5	< 5	
Filler	1317-65-3	1 - 5	
Titanium dioxide	13463-67-7	< 0.5	

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

Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

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

<u>Substance</u>	<u>Condition</u>
Carbon monoxide.	During combustion.
Carbon dioxide.	During combustion.
Hydrogen Fluoride	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

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.

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

Avoid inhalation of 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. Solids can generate static electricity charges when transferred and in mixing operations sufficient to be an ignition source. Evaluate the need for precautions, such as grounding and bonding, low energy transfer of material (e.g. low speed, short distance), or inert atmospheres.

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
Filler	1317-65-3	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	1317-65-3	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	1317-65-3	ACGIH	TWA(respirable particles):3 mg/m3	
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	1344-28-1	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, inhalable particles	1344-28-1	ACGIH	TWA(inhalable particulates):10 mg/m3	
Particles (insoluble or poorly soluble) not otherwise specified, respirable particles	1344-28-1	ACGIH	TWA(respirable particles):3 mg/m3	
Titanium dioxide	13463-67-7	ACGIH	TWA(Respirable nanoscale particles):0.2 mg/m3;TWA(Respirable finescale particles):2.5 mg/m3	A3: Confirmed animal carcinogen.
Titanium dioxide	13463-67-7	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m3	
Aluminium, soluable salts	13775-53-6	Australia OELs	TWA(as Al)(8 hours):2 mg/m3	
Fluorides	13775-53-6	ACGIH	TWA(as F):2.5 mg/m3 A4: Not class. as hur carcin	
Fluorides	13775-53-6	Australia OELs	TWA(as F)(8 hours): 2.5 mg/m3	
Fluorides	7789-75-5	ACGIH	TWA(as F):2.5 mg/m3	A4: Not class. as human carcin
Fluorides	7789-75-5	Australia OELs	TWA(as F)(8 hours): 2.5 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment CMRG : Chemical Manufacturer's Recommended Guidelines

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

Sen: Sensitiser

Sk: Absorption through the skin may be a significant source of exposure.

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.

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.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

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. Select and use respirators according to AS/NZS 1715. Respirators should comply with AS/NZS 1716 performance specifications. For information about respirators, call 3M on 1800 024 464.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state Solid. Colour Purple Odour Slight Polymeric Odour threshold Not applicable. pH Not applicable. Boiling point/Freezing point Not applicable. Boiling point/Initial boiling point/Boiling range Not applicable. Flash point Not applicable. Evaporation rate Not applicable. Flammability Not applicable. Flammability Not applicable. Flammable Limits(LEL) Not applicable. Flammable Limits(UEL) Not applicable. Vapour pressure Not applicable. Relative Vapor Density Not applicable. 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. Volatile organic compounds (VOC) Not applicable.	Information on basic physical and chemical properties			
OdourSlight PolymericOdour thresholdNot applicable.pHNot applicable.Melting point/Freezing pointNot applicable.Boiling point/Initial boiling point/Boiling rangeNot applicable.Flash pointNot applicable.Flash pointNot applicable.Flash pointNot applicable.FlammabilityNot applicable.Flammable Limits(LEL)Not applicable.Flammable Limits(UEL)Not applicable.Vapour pressureNot applicable.Relative Vapor DensityNot applicable.DensityNot applicable.Relative densityNot applicable.Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autognition temperatureNot applicable.Decomposition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Physical state	Solid.		
Odour threshold Not applicable. pH Not applicable. Melting point/Freezing point Not applicable. Boiling point/Initial boiling point/Boiling range 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 Vapor Density Not applicable. 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.	Colour	Purple		
pH Not applicable. Melting point/Freezing point Not applicable. Boiling point/Initial boiling point/Boiling range Not applicable. Flash point Not applicable. Evaporation rate Not applicable. Flammability Not applicable. Flammabile Limits(LEL) Not applicable. Flammable Limits(UEL) Not applicable. Flammable Limits(UEL) Not applicable. Relative Vapor Density Not applicable. Relative density Not applicable. Relative density Not applicable. Solubility Not applicable. Partition coefficient: n-octanol/water Not applicable. Partition coefficient: n-octanol/water Not applicable. Decomposition temperature Not applicable. Mot applicable. Not applicable.	Odour	Slight Polymeric		
Melting point/Freezing point Not applicable. Boiling point/Initial boiling point/Boiling range 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 Vapor 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.	Odour threshold	Not applicable.		
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Flammable Limits(LEL)Not applicable.Flammable Limits(UEL)Not applicable.Vapour pressureNot applicable.Relative Vapor DensityNot applicable.DensityNot applicable.Relative densityNot applicable.Water solubilityNot applicable.Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Evaporation rate	Not applicable.		
Flammable Limits(UEL)Not applicable.Vapour pressureNot applicable.Relative Vapor DensityNot applicable.DensityNot applicable.Belative densityNot applicable.Water solubilityNot applicable.Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Flammability	Not applicable.		
Flammable Limits(UEL)Not applicable.Vapour pressureNot applicable.Relative Vapor DensityNot applicable.DensityNot applicable.Belative densityNot applicable.Water solubilityNot applicable.Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.				
Vapour pressureNot applicable.Relative Vapor DensityNot applicable.DensityNot applicable.Relative densityNot applicable.Water solubilityNot applicable.Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Flammable Limits(LEL)	Not applicable.		
Relative Vapor DensityNot applicable.DensityNot applicable.Relative densityNot applicable.Water solubilityNot applicable.Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Flammable Limits(UEL)	Not applicable.		
DensityNot applicable.Relative densityNot applicable.Water solubilityNot applicable.Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Vapour pressure	Not applicable.		
Relative densityNot applicable.Water solubilityNot applicable.Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Relative Vapor 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.	Density	Not applicable.		
Solubility- non-waterNot applicable.Partition coefficient: n-octanol/waterNot applicable.Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Relative density	Not applicable.		
Partition coefficient: n-octanol/water Not applicable. Autoignition temperature Not applicable. Decomposition temperature Not applicable. Kinematic Viscosity Not applicable.	Water solubility	Not applicable.		
Autoignition temperatureNot applicable.Decomposition temperatureNot applicable.Kinematic ViscosityNot applicable.	Solubility- non-water	Not applicable.		
Decomposition temperature Not applicable. Kinematic Viscosity Not applicable.	Partition coefficient: n-octanol/water	Not applicable.		
Kinematic Viscosity Not applicable.	Autoignition temperature	Not applicable.		
	Decomposition temperature	Not applicable.		
Volatile organic compounds (VOC) Not applicable.	Kinematic Viscosity	Not applicable.		
	Volatile organic compounds (VOC)	Not applicable.		

Percent volatile	Not applicable.
VOC less H2O & exempt solvents	Not applicable.
Molecular weight	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. Conditions to avoid None known.

10.4. Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

<u>Substance</u>

None known.

Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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 created by grinding, sanding, or machining may cause irritation of the respiratory system. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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.

Condition

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. Dust created by grinding, sanding, or machining may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation- Dust/Mist(4 hr)		No data available; calculated ATE >12.5 mg/l
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 1	Dermal	Rabbit	LD50 > 2,100 mg/kg
Inorganic Fluoride 1	Inhalation-Dust/Mist (4 hours)	Rat	LC50 4.5 mg/l
Inorganic Fluoride 1	Ingestion	Rat	LD50 > 5,000 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
Inorganic Fluoride 2	Dermal	Professional judgement	LD50 estimated to be 2,000 - 5,000 mg/kg
Inorganic Fluoride 2	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.07 mg/l
Inorganic Fluoride 2	Ingestion	Rat	LD50 > 2,000 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

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 1	Multiple animal species	No significant irritation
Filler	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Ceramic Aluminum Oxide / Aluminum Oxide	Rabbit	No significant irritation
Mineral Blend (non-fibrous)		
Inorganic Fluoride 1	Rabbit	Mild irritant
Filler	Rabbit	No significant irritation
Titanium dioxide	Rabbit	No significant irritation

Skin Sensitisation

Skii Schsitisation				
Name	Species	Value		
Titanium dioxide	Human and animal	Not classified		

Respiratory Sensitisation

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

Carcinogenicity

Name	Route	Species	Value
Ceramic Aluminum Oxide /	Inhalation	Rat	Not carcinogenic
Aluminum Oxide Mineral Blend			
(non-fibrous)			
Titanium dioxide	Ingestion	Multiple animal	Not carcinogenic
	_	species	_
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	Rat	NOAEL 625	premating & during
		development		mg/kg/day	gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target	Value	Species	Test result	Exposure
		Organ(s)		_		Duration
Filler	Inhalation	respiratory	Not classified	Rat	NOAEL 0.812	90 minutes
		system			mg/l	

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target	Value	Species	Test result	Exposure
		Organ(s)		_		Duration
Ceramic	Inhalation	pneumoconiosis	Some positive	Human	NOAEL Not	occupational
Aluminum		_	data exist, but the		available	exposure
Oxide /			data are not			_
Aluminum			sufficient for			
Oxide			classification			

Mineral Blend (non-fibrous)						
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Inorganic Fluoride 1	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 1	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.00021 mg/l	90 days
Inorganic Fluoride 1	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	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

Aspiration Hazard

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

Exposure Levels

Refer Section 8.1 Control Parameters of this Safety Data Sheet.

Interactive Effects

Not Determined

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: GHS Acute 3: Harmful to aquatic life.

Chronic aquatic hazard:

GHS Chronic 3: Harmful to aquatic life with long lasting effects.

No product test data available.

Material	CAS Number	Organism	Туре	Exposure	Test endpoint	Test result
Ceramic Aluminum	1344-28-1	N/A	Experimental	96 hours	LC50	>100 mg/l
Oxide / Aluminum			1			
Oxide Mineral						
Blend (non-fibrous)						
Ceramic Aluminum	1344-28-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Oxide / Aluminum		5	1			
Oxide Mineral						
Blend (non-fibrous)						
Ceramic Aluminum	1344-28-1	Water flea	Experimental	48 hours	LC50	>100 mg/l
Oxide / Aluminum						
Oxide Mineral						
Blend (non-fibrous)						
Ceramic Aluminum	1344-28-1	Green algae	Experimental	72 hours	NOEC	>100 mg/l
Oxide / Aluminum						
Oxide Mineral						
Blend (non-fibrous)						
Inorganic Fluoride	13775-53-6	Green algae	Experimental	72 hours	ErC50	8.8 mg/l
1	10775 50 5			40.1		1.5.6 0
Inorganic Fluoride	13775-53-6	Water flea	Experimental	48 hours	EC50	156 mg/l
1	10775 52 5			0.01	1.050	
Inorganic Fluoride	13775-53-6	Zebra Fish	Experimental	96 hours	LC50	99 mg/l
	12775 52 (70.1	NOEG	1 /1
Inorganic Fluoride	13775-53-6	Green algae	Experimental	72 hours	NOEC	1 mg/l
I Inorganic Fluoride	12775 52 (2.1	ECCA	> 160 //
Inorganic Fluoride	13775-53-6	Activated sludge	Experimental	3 hours	EC50	>160 mg/l
Inorganic Fluoride	13775-53-6	Honeybee	E	1	LD50	2,245 ug/bee
	13//3-33-0	Honeybee	Experimental	1 days	LD30	2,243 ug/bee
Filler	1317-65-3	Green algae	Estimated	72 hours	EC50	>100 mg/l
Filler	1317-65-3	Rainbow trout	Estimated	96 hours	LC50	>100 mg/l
Filler	1317-65-3	Water flea	Estimated	48 hours	EC50	>100 mg/l
Filler	1317-65-3	Green algae	Estimated	72 hours	EC10	>100 mg/l
Inorganic Fluoride	7789-75-5	Diatom	Estimated	96 hours	EbC50	167 mg/l
2	1109-13-3	Diatoin	Estimated	90 110015	EUCJU	107 mg/1
Inorganic Fluoride	7789-75-5	Green algae	Estimated	96 hours	EbC50	89 mg/l
2	1105 15 5	Green algue	Estimated	yo nouis	LUCCO	
Inorganic Fluoride	7789-75-5	Mysid Shrimp	Estimated	96 hours	EC50	21.6 mg/l
2	1105 15 5	iviyoid ommip	Estimated	yo nouis	Leso	
Inorganic Fluoride	7789-75-5	Rainbow trout	Estimated	96 hours	LC50	21.4 mg/l
2	1103 10 0		Lotinatou	y o nouio	2000	
Inorganic Fluoride	7789-75-5	Scud	Estimated	14 days	Slight Polyether	5.1 mg/l
2					- <u>8</u> · · · j · · ·	
Inorganic Fluoride	7789-75-5	Scud	Estimated	96 hours	EC50	17 mg/l
2						
Inorganic Fluoride	7789-75-5	Rainbow trout	Estimated	21 days	NOEC	7.8 mg/l
2				5-		
Inorganic Fluoride	7789-75-5	Water flea	Estimated	21 days	NOEC	7.6 mg/l
2				2		
Inorganic Fluoride	7789-75-5	Activated sludge	Estimated	3 hours	NOEC	1,050 mg/l
2						
Inorganic Fluoride	7789-75-5	Bird	Estimated	24 hours	LD50	35 mg per kg of bodyweight
2						
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
	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	15-05-07-7	water nea	Experimental	40 110015	LC30	> 100 mg/1

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol

Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)		Data not available- insufficient	N/A	N/A	N/A	N/A
Inorganic Fluoride 1	13775-53-6	Data not available- insufficient	N/A	N/A	N/A	N/A
Filler	1317-65-3	Data not available- insufficient	N/A	N/A	N/A	N/A
Inorganic Fluoride 2	7789-75-5	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

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Ceramic Aluminum Oxide / Aluminum Oxide Mineral Blend (non-fibrous)		Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Inorganic Fluoride 1	13775-53-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Filler	1317-65-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Inorganic Fluoride 2	7789-75-5	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	

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.

Incinerate in a permitted waste incineration facility. Combustion products will include HF. Facility must be capable of handling halogenated materials.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport UN No.: Not applicable. Proper shipping name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable.

Hazchem Code: Not applicable

IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport UN No.: Not applicable. Proper shipping name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG)- Marine Transport UN No.: Not applicable. Proper shipping name: Not applicable. Class/Division: Not applicable. Sub Risk: Not applicable. Packing Group: Not applicable. Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory Status:

Not applicable, as this product/s aligns with the AICIS definition of an article.

SECTION 16: Other information

Revision information:

Initial issue.

DISCLAIMER: The information on this Safety Data Sheet 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 Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.

Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au