



## Safety Data Sheet

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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(TM) Marine Adhesive Sealant Fast Cure 5200, White; PN 06520 , 05220, 06534, 06535

#### Product Identification Numbers

60-9800-4557-3      60-9800-4558-1

#### 1.2. Recommended use and restrictions on use

##### Recommended use

Adhesive Sealant, Sealant.

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 classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011.

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

#### 2.1. Classification of the substance or mixture

Respiratory Sensitizer: Category 1.

Skin Sensitizer: Category 1.

Specific Target Organ Toxicity (repeated exposure): Category 2.

#### 2.2. Label elements

The label elements below were prepared in accordance with the Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Safe Work Australia, December 2011). This information may be different from the actual product

label.

**Signal word**

DANGER!

**Symbols**

Health Hazard |

**Pictograms**



**Hazard statements**

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H373 May cause damage to organs through prolonged or repeated exposure:  
respiratory system |

**Precautionary statements**

**General:**

P102 Keep out of reach of children.  
P103 Read label before use.  
P101 If medical advice is needed, have product container or label at hand.

**Prevention:**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P285 In case of inadequate ventilation wear respiratory protection.  
P280E Wear protective gloves.  
P272 Contaminated work clothing should not be allowed out of the workplace.

**Response:**

P304 + P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.  
P363 Wash contaminated clothing before reuse.  
P321 Specific treatment (see Notes to Physician on this label).  
P314 Get medical advice/attention if you feel unwell.

**Disposal:**

P501 Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

**2.3. Other assigned/identified product hazards**

None known.

**2.4. Other hazards which do not result in classification**

Causes mild skin irritation. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

### SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Urethane Polymer	51447-37-1	40 - 70
Titanium dioxide	13463-67-7	10 - 30
Fumed silica	112945-52-5	1 - 5
p,p'-Methylenebis(Phenyl Isocyanate)	101-68-8	< 2.4
Zinc Oxide	1314-13-2	< 2.3
Alkyl Isocyanate Silane	85702-90-5	< 2
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	< 2.0
Fumed silica	7631-86-9	0.5 - 1.5
Heptane	142-82-5	< 0.3
(Gamma-mercaptopropyl)trimethoxysilane	4420-74-0	< 0.2
Hexamethylene diisocyanate	822-06-0	< 0.015

### 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

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. 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

Rinse mouth. If you feel unwell, get medical attention.

#### 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

#### 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

None inherent in this product.

#### Hazardous Decomposition or By-Products

##### Substance

Isocyanates

Carbon monoxide.

##### Condition

During combustion.

During combustion.

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Carbon dioxide.	During combustion.
Hydrogen cyanide.	During combustion.
Oxides of nitrogen.	During combustion.
Toxic vapour, gas, particulate.	During combustion.

### 5.3. Special protective actions for fire-fighters

No special protective actions for fire-fighters are anticipated.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

### 6.3. Methods and material for containment and cleaning up

Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Dispose of collected material as soon as possible.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Keep out of reach of children. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage including any incompatibilities

Keep container tightly closed to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from amines.

## 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
Free isocyanates	101-68-8	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	101-68-8	Australia OELs	TWA(as NCO)(8 hours):0.02 mg/m3;STEL(as NCO)(15 minutes):0.07 mg/m3	

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p,p'-Methylenebis(Phenyl Isocyanate)	101-68-8	ACGIH	TWA:0.005 ppm	
p,p'-Methylenebis(Phenyl Isocyanate)	101-68-8	Australia OELs	TWA(8 hours):0.02 mg/m <sup>3</sup> ;STEL(15 minutes):0.07 mg/m <sup>3</sup>	
Silicon dioxide	112945-52-5	Australia OELs	TWA(respirable fraction)(8 hours):2 mg/m <sup>3</sup>	
Zinc Oxide	1314-13-2	ACGIH	TWA(respirable fraction):2 mg/m <sup>3</sup> ;STEL(respirable fraction):10 mg/m <sup>3</sup>	
Zinc Oxide	1314-13-2	Australia OELs	TWA(as fume)(8 hours):5 mg/m <sup>3</sup> ;TWA(Inspirable dust)(8 hours):10 mg/m <sup>3</sup> ;STEL(as fume)(15 minutes):10 mg/m <sup>3</sup>	
Titanium dioxide	13463-67-7	ACGIH	TWA:10 mg/m <sup>3</sup>	A4: Not class. as human carcin
Titanium dioxide	13463-67-7	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m <sup>3</sup>	
Titanium dioxide	13463-67-7	CMRG	TWA(as respirable dust):5 mg/m <sup>3</sup>	
Heptane	142-82-5	ACGIH	TWA:400 ppm;STEL:500 ppm	
Heptane	142-82-5	Australia OELs	TWA(8 hours):1640 mg/m <sup>3</sup> (400 ppm);STEL(15 minutes):2050 mg/m <sup>3</sup> (500 ppm)	
Fumed silica	7631-86-9	Australia OELs	TWA(respirable fraction)(8 hours):2 mg/m <sup>3</sup>	
Fumed silica	7631-86-9	CMRG	TWA(as respirable dust):3 mg/m <sup>3</sup>	
Silica gel, precipitated, crystalline-free	7631-86-9	Australia OELs	TWA(Inspirable fraction)(8 hours):10 mg/m <sup>3</sup>	
Free isocyanates	822-06-0	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Free isocyanates	822-06-0	Australia OELs	TWA(as NCO)(8 hours):0.02 mg/m <sup>3</sup> ;STEL(as NCO)(15 minutes):0.07 mg/m <sup>3</sup>	
Hexamethylene diisocyanate	822-06-0	ACGIH	TWA:0.005 ppm	
Hexamethylene diisocyanate	822-06-0	Australia OELs	TWA(8 hours):0.02 mg/m <sup>3</sup> ;STEL(15 minutes):0.07 mg/m <sup>3</sup>	
Hexamethylene diisocyanate	822-06-0	CMRG	CEIL:0.02 ppm	

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

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

None required.

### Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity.

Gloves made from the following material(s) are recommended: Polymer laminate

if this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Select and use gloves according to AS/NZ 2161.

### Respiratory protection

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 organic vapours and 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

<b>Physical state</b>	Liquid.
<b>Specific Physical Form:</b>	Paste
<b>Appearance/Odour</b>	White thixotropic paste, slight odour
<b>Odour threshold</b>	<i>No data available.</i>
<b>pH</b>	<i>Not applicable.</i>
<b>Melting point/Freezing point</b>	<i>Not applicable.</i>
<b>Boiling point/Initial boiling point/Boiling range</b>	<i>Not applicable.</i>
<b>Flash point</b>	No flash point
<b>Evaporation rate</b>	<i>No data available.</i>
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Flammable Limits(LEL)</b>	<i>Not applicable.</i>
<b>Flammable Limits(UEL)</b>	<i>Not applicable.</i>
<b>Vapour pressure</b>	<i>No data available.</i>
<b>Vapour density</b>	<i>No data available.</i>
<b>Density</b>	1.3 g/ml
<b>Relative density</b>	1.3 [Ref Std: WATER=1]
<b>Water solubility</b>	Nil
<b>Solubility- non-water</b>	<i>No data available.</i>
<b>Partition coefficient: n-octanol/water</b>	<i>No data available.</i>
<b>Autoignition temperature</b>	<i>No data available.</i>
<b>Decomposition temperature</b>	<i>No data available.</i>

Viscosity	100,000 - 500,000 mPa-s
Molecular weight	No data available.
Volatile organic compounds (VOC)	38 g/l [ <i>Test Method</i> :tested per EPA method 24] [ <i>Details</i> :EU VOC content]
Percent volatile	2.83 % weight
VOC less H <sub>2</sub> O & exempt solvents	38 g/l [ <i>Test Method</i> :tested per EPA method 24]

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

### 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

Amines.  
Alcohols.  
Water

### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

## 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

Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

#### Skin contact

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

**Eye contact**

Contact with the eyes during product use is not expected to result in significant irritation.

**Ingestion**

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea.

**Additional Health Effects:**

**Prolonged or repeated exposure may cause target organ effects:**

Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

**Additional information:**

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.

**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-Vapour(4 hr)		No data available; calculated ATE >50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Urethane Polymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Urethane Polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Fumed silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fumed silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fumed silica	Ingestion	Rat	LD50 > 5,110 mg/kg
p,p'-Methylenebis(Phenyl Isocyanate)	Dermal	Rabbit	LD50 > 5,000 mg/kg
p,p'-Methylenebis(Phenyl Isocyanate)	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
p,p'-Methylenebis(Phenyl Isocyanate)	Ingestion	Rat	LD50 31,600 mg/kg
Zinc Oxide	Dermal		LD50 estimated to be > 5,000 mg/kg
Zinc Oxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.7 mg/l
Zinc Oxide	Ingestion	Rat	LD50 > 5,000 mg/kg
2-(2-Ethoxyethoxy)ethyl acetate	Dermal	Rabbit	LD50 15,000 mg/kg
2-(2-Ethoxyethoxy)ethyl acetate	Ingestion	Rat	LD50 11,000 mg/kg
Fumed silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fumed silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fumed silica	Ingestion	Rat	LD50 > 5,110 mg/kg
Heptane	Dermal	Rabbit	LD50 3,000 mg/kg
Heptane	Inhalation-Vapour (4 hours)	Rat	LC50 103 mg/l
Heptane	Ingestion	Rat	LD50 > 15,000 mg/kg
(Gamma-	Dermal	Rabbit	LD50 2,270 mg/kg



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mercaptopropyl)trimethoxysilane			
(Gamma-mercaptopropyl)trimethoxysilane	Ingestion	Rat	LD50 770 mg/kg
Hexamethylene diisocyanate	Dermal	Rabbit	LD50 570 mg/kg
Hexamethylene diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.12 mg/l
Hexamethylene diisocyanate	Ingestion	Rat	LD50 710 mg/kg

ATE = acute toxicity estimate

**Skin Corrosion/Irritation**

Name	Species	Value
Titanium dioxide	Rabbit	No significant irritation
Fumed silica	Rabbit	No significant irritation
p,p'-Methylenebis(Phenyl Isocyanate)	official classification	Irritant
Zinc Oxide	Human and animal	No significant irritation
2-(2-Ethoxyethoxy)ethyl acetate	Human and animal	Minimal irritation
Fumed silica	Rabbit	No significant irritation
Heptane	Human	Mild irritant
Hexamethylene diisocyanate	Rabbit	Corrosive

**Serious Eye Damage/Irritation**

Name	Species	Value
Titanium dioxide	Rabbit	No significant irritation
Fumed silica	Rabbit	No significant irritation
p,p'-Methylenebis(Phenyl Isocyanate)	official classification	Severe irritant
Zinc Oxide	Rabbit	Mild irritant
2-(2-Ethoxyethoxy)ethyl acetate	Rabbit	Mild irritant
Fumed silica	Rabbit	No significant irritation
Heptane	Professional judgement	Moderate irritant
Hexamethylene diisocyanate	Rabbit	Corrosive

**Skin Sensitisation**

Name	Species	Value
Titanium dioxide	Human and animal	Not sensitizing
Fumed silica	Human and animal	Not sensitizing
p,p'-Methylenebis(Phenyl Isocyanate)	official classification	Sensitising
Zinc Oxide	Guinea pig	Some positive data exist, but the data are not sufficient for classification
2-(2-Ethoxyethoxy)ethyl acetate	Human and animal	Not sensitizing
Fumed silica	Human and animal	Not sensitizing
Hexamethylene diisocyanate	Multiple animal species	Sensitising

**Respiratory Sensitisation**

Name	Species	Value
p,p'-Methylenebis(Phenyl Isocyanate)	Human	Sensitising
Hexamethylene diisocyanate	Human and animal	Sensitising

**Germ Cell Mutagenicity**

Name	Route	Value
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Fumed silica	In Vitro	Not mutagenic

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p,p'-Methylenebis(Phenyl Isocyanate)	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc Oxide	In Vitro	Some positive data exist, but the data are not sufficient for classification
Zinc Oxide	In vivo	Some positive data exist, but the data are not sufficient for classification
2-(2-Ethoxyethoxy)ethyl acetate	In Vitro	Not mutagenic
Fumed silica	In Vitro	Not mutagenic
Heptane	In Vitro	Not mutagenic
Hexamethylene diisocyanate	In Vitro	Not mutagenic
Hexamethylene diisocyanate	In vivo	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.
Fumed silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
p,p'-Methylenebis(Phenyl Isocyanate)	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Fumed silica	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Hexamethylene diisocyanate	Inhalation	Rat	Not carcinogenic

**Reproductive Toxicity**

**Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Fumed silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fumed silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fumed silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
p,p'-Methylenebis(Phenyl Isocyanate)	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL 0.004 mg/l	during organogenesis
Zinc Oxide	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 125 mg/kg/day	prematuring & during gestation
Fumed silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fumed silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fumed silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Hexamethylene diisocyanate	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene diisocyanate	Inhalation	Not toxic to development	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene	Inhalation	Some positive male	Rat	NOAEL	4 weeks

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diisocyanate		reproductive data exist, but the data are not sufficient for classification		0.014 mg/l	
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**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
p,p'-Methylenebis(Phenyl Isocyanate)	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
2-(2-Ethoxyethoxy)ethyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	not applicable
2-(2-Ethoxyethoxy)ethyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not applicable
Heptane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Heptane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Heptane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Hexamethylene diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Hexamethylene diisocyanate	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

**Specific Target Organ Toxicity - repeated exposure**

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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	All data are negative	Human	NOAEL Not available	occupational exposure
Fumed silica	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
p,p'-Methylenebis(Phenyl Isocyanate)	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Zinc Oxide	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for	Rat	NOAEL 600 mg/kg/day	10 days

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			classification			
Zinc Oxide	Ingestion	endocrine system   hematopoietic system   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Other	NOAEL 500 mg/kg/day	6 months
2-(2-Ethoxyethoxy)ethyl acetate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.48 mg/l	2 weeks
2-(2-Ethoxyethoxy)ethyl acetate	Inhalation	liver   immune system   kidney and/or bladder	All data are negative	Rat	NOAEL 0.48 mg/l	2 weeks
Fumed silica	Inhalation	respiratory system   silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Heptane	Inhalation	liver   nervous system   kidney and/or bladder	All data are negative	Rat	NOAEL 12 mg/l	26 weeks
Hexamethylene diisocyanate	Inhalation	liver   kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.002 mg/l	3 weeks
Hexamethylene diisocyanate	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.0014 mg/l	4 weeks
Hexamethylene diisocyanate	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.0012 mg/l	2 years
Hexamethylene diisocyanate	Inhalation	nervous system	All data are negative	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene diisocyanate	Inhalation	heart	All data are negative	Rat	NOAEL 0.001 mg/l	90 days

**Aspiration Hazard**

Name	Value
Heptane	Aspiration hazard

**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**

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**Acute aquatic hazard:**

GHS Acute 2: Toxic 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	Type	Exposure	Test endpoint	Test result
(Gamma-mercaptopropyl)trimethoxysilane	4420-74-0	Green algae	Experimental	72 hours	EC50	267 mg/l
(Gamma-mercaptopropyl)trimethoxysilane	4420-74-0	Water flea	Experimental	48 hours	EC50	6.7 mg/l
(Gamma-mercaptopropyl)trimethoxysilane	4420-74-0	Zebra Fish	Experimental	96 hours	LC50	439 mg/l
Alkyl Isocyanate Silane	85702-90-5		Data not available or insufficient for classification			
2-(2-Ethoxyethoxy) ethyl acetate	112-15-2	Fathead minnow	Experimental	96 hours	LC50	110 mg/l
Urethane Polymer	51447-37-1		Data not available or insufficient for classification			
Heptane	142-82-5		Data not available or insufficient for classification			
Hexamethylene diisocyanate	822-06-0	Water flea	Experimental	21 days	NOEC	4.2 mg/l
Hexamethylene diisocyanate	822-06-0	Ricefish	Experimental	96 hours	LC50	71 mg/l
Hexamethylene diisocyanate	822-06-0	Water flea	Experimental	48 hours	EC50	27 mg/l
Hexamethylene diisocyanate	822-06-0	Green algae	Experimental	72 hours	EC50	15 mg/l
Hexamethylene diisocyanate	822-06-0	Green Algae	Experimental	72 hours	NOEC	10 mg/l
p,p'-Methylenebis(Phenyl Isocyanate)	101-68-8		Data not available or insufficient for classification			
Fumed silica	7631-86-9		Data not available or insufficient for classification			
Fumed silica	112945-52-5	Zebra Fish	Analogous	96 hours	LC50	5,000 mg/l

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			Compound			
Fumed silica	112945-52-5	Water flea	Analogous Compound	48 hours	EC50	7,600 mg/l
Fumed silica	112945-52-5	Green algae	Analogous Compound	72 hours	EC50	440 mg/l
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Crustacea other	Experimental	96 hours	EC50	>300 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>=1,000 mg/l
Zinc Oxide	1314-13-2	Green Algae	Experimental	72 hours	EC50	0.046 mg/l
Zinc Oxide	1314-13-2	Water flea	Experimental	48 hours	EC50	3.2 mg/l
Zinc Oxide	1314-13-2	Chinook Salmon	Experimental	96 hours	LC50	0.23 mg/l
Zinc Oxide	1314-13-2	Green Algae	Experimental	72 hours	NOEC	0.021 mg/l

**12.2. Persistence and degradability**

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Heptane	142-82-5	Experimental Photolysis		Photolytic half-life (in air)	4.24 days (t 1/2)	Other methods
(Gamma-mercaptopropyl)trimethoxysilane	4420-74-0	Estimated Hydrolysis		Hydrolytic half-life	53.3 minutes (t 1/2)	Other methods
p,p'-Methylenebis(Phenyl Isocyanate)	101-68-8	Experimental Hydrolysis		Hydrolytic half-life	<2 hours (t 1/2)	Other methods
Hexamethylene diisocyanate	822-06-0	Experimental Hydrolysis		Hydrolytic half-life	5 minutes (t 1/2)	Other methods
2-(2-Ethoxyethoxy) ethyl acetate	112-15-2	Experimental Biodegradation	28 days	BOD	100 % weight	OECD 301C - MITI test (I)
Alkyl Isocyanate Silane	85702-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Urethane Polymer	51447-37-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Fumed silica	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Hexamethylene diisocyanate	822-06-0	Experimental Biodegradation	14 days	BOD	55.5 % weight	OECD 301C - MITI test (I)
Titanium	13463-67-7	Data not	N/A	N/A	N/A	N/A

dioxide		available or insufficient for classification				
Zinc Oxide	1314-13-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Fumed silica	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Heptane	142-82-5	Experimental Biodegradation	28 days	BOD	101 % weight	OECD 301C - MITI test (I)
p,p'-Methylenebis(P henyl Isocyanate)	101-68-8	Experimental Biodegradation	28 days	BOD	0 % weight	OECD 301C - MITI test (I)

### 12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Urethane Polymer	51447-37-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Fumed silica	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Alkyl Isocyanate Silane	85702-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Fumed silica	7631-86-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Zinc Oxide	1314-13-2	Experimental BCF - Other	56 days	Bioaccumulation factor	<217	OECD 305E - Bioaccumulation flow-through fish test
Heptane	142-82-5	Estimated BCF - Other		Bioaccumulation factor	107	Estimated: Bioconcentration factor
Hexamethylene diisocyanate	822-06-0	Estimated Bioconcentration		Bioaccumulation factor	158	Estimated: Bioconcentration factor
p,p'-Methylenebis(P henyl Isocyanate)	101-68-8	Experimental BCF-Carp	28 days	Bioaccumulation factor	200	Other methods
Titanium dioxide	13463-67-7	Experimental BCF - Other	42 days	Bioaccumulation factor	9.6	Other methods
2-(2-Ethoxyethoxy) ethyl acetate	112-15-2	Estimated Bioconcentration		Log Kow	0.32	Estimated: Octanol-water partition coefficient
(Gamma-	4420-74-0	Estimated		Log Kow	0.25	Estimated: Octanol-

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mercaptopropyl )trimethoxysila ne		Bioconcentrati on				water partition coefficient
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#### 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 uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes.

### 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:

The chemical components contained within this product are listed on the Australian Inventory of Chemical Substances and are in compliance with the requirements of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.



**Poison Schedule:** This product has not been assessed for poisons scheduling as the product is intended for industrial and professional use only.

## **SECTION 16: Other information**

**Revision information:**

Complete document review.

**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](http://www.3m.com.au)**