



## Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

3M™ Marine Adhesive Sealant 5200 Mahogany PN 06502

#### Product Identification Numbers

UU-0042-1542-0

7100082436

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### Identified uses

Sealant.

#### 1.3. Details of the supplier of the safety data sheet

<b>Address:</b>	3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
<b>Telephone:</b>	+353 1 280 3555
<b>E Mail:</b>	tox.uk@mmm.com
<b>Website:</b>	www.3M.com

#### 1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

### SECTION 2: Hazard identification

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

**CLP REGULATION (EC) No 1272/2008**

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

The carcinogenicity classification for titanium dioxide is not applicable based on physical form (material is not a powder).

#### **CLASSIFICATION:**

Acute Toxicity, Category 4 - Acute Tox. 4; H332

Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334  
Skin Sensitization, Category 1 - Skin Sens. 1; H317  
Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

## 2.2. Label elements

### CLP REGULATION (EC) No 1272/2008

#### SIGNAL WORD

DANGER.

#### Symbols

GHS07 (Exclamation mark) | GHS08 (Health Hazard) |

#### Pictograms



#### Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-isocyanatohexyl)-10,12-dioxo-2,9,11,13-tetraazanonadecanethioate	85702-90-5	402-290-8	0.5 - 1.5
m-tolylidene diisocyanate	26471-62-5	247-722-4	< 0.5
3-Trimethoxysilylpropane-1-thiol	4420-74-0	224-588-5	< 0.2

#### HAZARD STATEMENTS:

H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

#### PRECAUTIONARY STATEMENTS

##### Prevention:

P261A	Avoid breathing vapours.
P280E	Wear protective gloves.

##### Response:

P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

#### SUPPLEMENTAL INFORMATION:

##### Supplemental Hazard Statements:

EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
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Contains 1% of components with unknown hazards to the aquatic environment.

**Information required per Regulation (EU) 2020/1149 as regards diisocyanates:**

**As from 24 August 2023 adequate training is required before industrial or professional use. Further information can be found at [feica.eu/Puinfo](https://feica.eu/Puinfo)**

**2.3. Other hazards**

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

This material does not contain any substances that are assessed to be a PBT or vPvB

## SECTION 3: Composition/information on ingredients

**3.1. Substances**

Not applicable

**3.2. Mixtures**

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Glycerol-propylene oxide copolymer with toluene diisocyanate and 1,2 propanediol homopolymer, isocyanate-terminated	(CAS-No.) 68611-34-7	40 - 70	Substance not classified as hazardous
Talc	(CAS-No.) 14807-96-6 (EC-No.) 238-877-9	10 - 30	Substance with a national occupational exposure limit
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-isocyanatohexyl)-10,12-dioxo-2,9,11,13-tetraazanonadecanethioate	(CAS-No.) 85702-90-5 (EC-No.) ELINCS 402-290-8	0.5 - 1.5	Flam. Liq. 3, H226 Resp. Sens. 1, H334 Skin Sens. 1, H317
2-(2-Ethoxyethoxy)ethyl acetate	(CAS-No.) 112-15-2 (EC-No.) 203-940-1 (REACH-No.) 01-2119966911-29	1 - 5	Eye Irrit. 2, H319
Synthetic amorphous silica, fumed, crystalline-free	(CAS-No.) 112945-52-5	1 - 5	Substance not classified as hazardous
Iron(III) oxide	Mixture	0.5 - 5	Substance with a national occupational exposure limit
zinc oxide	(CAS-No.) 1314-13-2 (EC-No.) 215-222-5	1 - 5	Aquatic Acute 1, H400,M=1 Aquatic Chronic 1, H410,M=1
m-tolylidene diisocyanate	(CAS-No.) 26471-62-5 (EC-No.) 247-722-4	< 0.5	Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1A, H334 Skin Sens. 1A, H317 Carc. 2, H351 STOT SE 3, H335 Aquatic Chronic 3, H412 Nota C
Quartz	(CAS-No.) 14808-60-7 (EC-No.) 238-878-4	< 0.5	STOT RE 1, H372

Titanium dioxide	(CAS-No.) 13463-67-7 (EC-No.) 236-675-5 (REACH-No.) 01-2119489379-17	1 - 5	Carc. 2, H351 (inhalation)
3-Trimethoxysilylpropane-1-thiol	(CAS-No.) 4420-74-0 (EC-No.) 224-588-5	< 0.2	Acute Tox. 4, H302 Skin Sens. 1B, H317 Aquatic Chronic 2, H411

Please see section 16 for the full text of any H statements referred to in this section

### Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
m-tolylidene diisocyanate	(CAS-No.) 26471-62-5 (EC-No.) 247-722-4	(C >= 0.1%) Resp. Sens. 1A, H334

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

## 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

The most important symptoms and effects based on the CLP classification include:

Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Harmful if inhaled. Allergic skin reaction (redness, swelling, blistering, and itching).

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

Not applicable

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

DO NOT USE WATER 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  
Carbon dioxide.  
Hydrogen cyanide.  
Irritant vapours or gases.  
Oxides of nitrogen.

**Condition**

During combustion.  
During combustion.  
During combustion.  
During combustion.  
During combustion.  
During combustion.

**5.3. Advice 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 vapours, 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.

**6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

Keep out of reach of children. Do not handle until all safety precautions have been read and understood. 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. Use personal protective equipment (eg. gloves, respirators...) as required.

**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 heat. Store away from amines.

**7.3. Specific end use(s)**

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

**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
zinc oxide	1314-13-2	Ireland OELs	TWA(Respirable fraction & fume)(8 hours):2 mg/m <sup>3</sup> ;STEL(Respirable fraction & fume)(15 minutes):10 mg/m <sup>3</sup>	
Titanium dioxide	13463-67-7	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m <sup>3</sup> ;TWA(as respirable dust)(8 hours):4 mg/m <sup>3</sup>	
Talc	14807-96-6	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m <sup>3</sup> ;TWA(as respirable dust)(8 hours):0.8 mg/m <sup>3</sup>	
Iron(III) oxide	Mixture	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m <sup>3</sup> ;TWA(as respirable dust)(8 hours):4 mg/m <sup>3</sup> ;TWA(as Fe, fume)(8 hours):5 mg/m <sup>3</sup> ;STEL(as Fe, fume)(15 minutes):10 mg/m <sup>3</sup>	

Ireland OELs : Ireland. OELs

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

### Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

**Recommended monitoring procedures:**Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

## 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

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.

#### Applicable Norms/Standards

Use eye protection conforming to EN 166

#### 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:

Material	Thickness (mm)	Breakthrough Time
Polymer laminate	No data available	No data available

#### Applicable Norms/Standards

Use gloves tested to EN 374

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

#### 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

Half facepiece or full facepiece supplied-air respirator

For questions about suitability for a specific application, consult with your respirator manufacturer.

#### Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136

Use a respirator conforming to EN 140 or EN 136: filter types A & P

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	Liquid.
Specific Physical Form:	Paste
Colour	Brown, Red
Odor	isocyanates
Odour threshold	No data available.
Melting point/freezing point	No data available.
Boiling point/boiling range	Not applicable.
Flammability (solid, gas)	Not applicable.
Flammable Limits(LEL)	Not applicable.
Flammable Limits(UEL)	Not applicable.
Flash point	No flash point
Autoignition temperature	No data available.
Decomposition temperature	No data available.
pH	substance/mixture is non-soluble (in water)
Kinematic Viscosity	30,769 mm <sup>2</sup> /sec
Water solubility	Nil
Solubility- non-water	No data available.
Partition coefficient: n-octanol/water	No data available.
Vapour pressure	No data available.
Density	1.3 kg/l
Relative density	1.3 [Ref Std: WATER=1]
Relative Vapor Density	No data available.

### 9.2. Other information

### 9.2.2 Other safety characteristics

EU Volatile Organic Compounds

*No data available.*

Evaporation rate

*No data available.*

Molecular weight

*No data available.*

## 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 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat.

### 10.5 Incompatible materials

Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure buildup.

Amines.

Alcohols.

Water

### 10.6 Hazardous decomposition products

Substance

Condition

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

## SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

#### Inhalation

Harmful if inhaled. 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

Contact with the skin during product use is not expected to result in significant irritation. 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. May cause additional health effects (see below).

### Additional Health Effects:

### Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

### Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

### 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 >10 - =20 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Talc	Dermal		LD50 estimated to be > 5,000 mg/kg
Talc	Ingestion		LD50 estimated to be > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic amorphous silica, fumed, crystalline-free	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Rat	LD50 > 5,110 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
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
Iron(III) oxide	Dermal	Not available	LD50 3,100 mg/kg
Iron(III) oxide	Ingestion	Not available	LD50 3,700 mg/kg
m-tolylidene diisocyanate	Inhalation-Vapour (4 hours)	Mouse	LC50 0.12 mg/l
m-tolylidene diisocyanate	Dermal	Rabbit	LD50 > 9,400 mg/kg
m-tolylidene diisocyanate	Inhalation-	Rat	LC50 0.35 mg/l

	Dust/Mist (4 hours)		
m-tolylidene diisocyanate	Ingestion	Rat	LD50 > 5,000 mg/kg
Quartz	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz	Ingestion		LD50 estimated to be > 5,000 mg/kg
3-Trimethoxysilylpropane-1-thiol	Dermal	Rabbit	LD50 2,270 mg/kg
3-Trimethoxysilylpropane-1-thiol	Ingestion	Rat	LD50 770 mg/kg

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

Name	Species	Value
Talc	Rabbit	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
zinc oxide	Human and animal	No significant irritation
2-(2-Ethoxyethoxy)ethyl acetate	Human and animal	Minimal irritation
Titanium dioxide	Rabbit	No significant irritation
Iron(III) oxide	Rabbit	No significant irritation
m-tolylidene diisocyanate	Rabbit	Irritant
Quartz	Professional judgement	No significant irritation
3-Trimethoxysilylpropane-1-thiol	Rabbit	No significant irritation

### Serious Eye Damage/Irritation

Name	Species	Value
Talc	Rabbit	No significant irritation
Synthetic amorphous silica, fumed, crystalline-free	Rabbit	No significant irritation
zinc oxide	Rabbit	Mild irritant
2-(2-Ethoxyethoxy)ethyl acetate	Rabbit	Severe irritant
Titanium dioxide	Rabbit	No significant irritation
Iron(III) oxide	Rabbit	No significant irritation
m-tolylidene diisocyanate	Rabbit	Corrosive
3-Trimethoxysilylpropane-1-thiol	Rabbit	No significant irritation

### Skin Sensitisation

Name	Species	Value
Synthetic amorphous silica, fumed, crystalline-free	Human and animal	Not classified
zinc oxide	Guinea pig	Not classified
2-(2-Ethoxyethoxy)ethyl acetate	Human and animal	Not classified
Titanium dioxide	Human and animal	Not classified
Iron(III) oxide	Human	Not classified
m-tolylidene diisocyanate	Human and animal	Sensitising
3-Trimethoxysilylpropane-1-thiol	Guinea pig	Sensitising

**Respiratory Sensitisation**

Name	Species	Value
Talc	Human	Not classified
m-tolylidene diisocyanate	Human	Sensitising

**Germ Cell Mutagenicity**

Name	Route	Value
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Synthetic amorphous silica, fumed, crystalline-free	In Vitro	Not mutagenic
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
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Iron(III) oxide	In Vitro	Not mutagenic
m-tolylidene diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz	In vivo	Some positive data exist, but the data are not sufficient for classification
3-Trimethoxysilylpropane-1-thiol	In Vitro	Not mutagenic

**Carcinogenicity**

Name	Route	Species	Value
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Synthetic amorphous silica, fumed, crystalline-free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic
Titanium dioxide	Inhalation	Rat	Carcinogenic.
Iron(III) oxide	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification
m-tolylidene diisocyanate	Inhalation	Human and animal	Not carcinogenic
m-tolylidene diisocyanate	Ingestion	Multiple animal species	Carcinogenic.
Quartz	Inhalation	Human and animal	Carcinogenic.

**Reproductive Toxicity****Reproductive and/or Developmental Effects**

Name	Route	Value	Species	Test result	Exposure Duration
Talc	Ingestion	Not classified for development	Rat	NOAEL 1,600 mg/kg	during organogenesis
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic amorphous silica, fumed, crystalline-free	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis

zinc oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
m-tolylidene diisocyanate	Inhalation	Not classified for female reproduction	Rat	NOAEL 0.002 mg/l	2 generation
m-tolylidene diisocyanate	Inhalation	Not classified for male reproduction	Rat	NOAEL 0.002 mg/l	2 generation
m-tolylidene diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
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
m-tolylidene diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure

### Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Talc	Inhalation	pneumoconiosis	Repeated and prolonged exposure to large amounts of talc dust can cause lung injury	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis   respiratory system	Not classified	Rat	NOAEL 18 mg/m <sup>3</sup>	113 weeks
Synthetic amorphous silica, fumed, crystalline-free	Inhalation	respiratory system   silicosis	Not classified	Human	NOAEL Not available	occupational exposure
zinc oxide	Ingestion	nervous system	Not classified	Rat	NOAEL 600 mg/kg/day	10 days
zinc oxide	Ingestion	endocrine system   hematopoietic system   kidney and/or bladder	Not classified	Other	NOAEL 500 mg/kg/day	6 months
2-(2-Ethoxyethoxy)ethyl acetate	Inhalation	respiratory system   liver   immune system   kidney and/or bladder	Not classified	Rat	NOAEL 0.48 mg/l	2 weeks
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
Iron(III) oxide	Inhalation	pulmonary fibrosis   pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
m-tolylidene diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL 0 mg/l	occupational exposure
Quartz	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure

## Aspiration Hazard

For the component/components, either no data is currently available or the data is 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.**

## 11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

## SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

### 12.1. Toxicity

No product test data available.

Material	CAS #	Organism	Type	Exposure	Test endpoint	Test result
Glycerol-propylene oxide copolymer with toluene diisocyanate and 1,2 propanediol homopolymer, isocyanate-terminated	68611-34-7		Data not available or insufficient for classification			N/A
Talc	14807-96-6		Data not available or insufficient for classification			N/A
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-isocyanatohexyl)-10,12-dioxo-2,9,11,13-tetraazonadecanethioate	85702-90-5		Data not available or insufficient for classification			N/A
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	Fathead minnow	Experimental	96 hours	LC50	110 mg/l
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	Green algae	Experimental	72 hours	EC50	>100 mg/l
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	Water flea	Experimental	48 hours	EC50	>100 mg/l
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	Green algae	Experimental	72 hours	NOEC	100 mg/l
Iron(III) oxide	Mixture	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Iron(III) oxide	Mixture	Water flea	Experimental	48 hours	No tox obs at lmt of water sol	>100 mg/l
Iron(III) oxide	Mixture	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Iron(III) oxide	Mixture	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Iron(III) oxide	Mixture	Water flea	Experimental	21 days	No tox obs at lmt of water sol	>100 mg/l
Iron(III) oxide	Mixture	Activated sludge	Experimental	3 hours	EC50	>10,000 mg/l
Quartz	14808-60-7	Green algae	Estimated	72 hours	EC50	440 mg/l
Quartz	14808-60-7	Water flea	Estimated	48 hours	EC50	7,600 mg/l
Quartz	14808-60-7	Zebra Fish	Estimated	96 hours	LC50	5,000 mg/l
Quartz	14808-60-7	Green algae	Estimated	72 hours	NOEC	60 mg/l

Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green algae	Experimental	72 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green algae	Experimental	72 hours	NOEC	60 mg/l
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
m-tolylidene diisocyanate	26471-62-5	Green algae	Estimated	96 hours	EC50	9.54 mg/l
m-tolylidene diisocyanate	26471-62-5	Water flea	Estimated	48 hours	EC50	1.6 mg/l
m-tolylidene diisocyanate	26471-62-5	Zebra Fish	Estimated	96 hours	LC50	392 mg/l
m-tolylidene diisocyanate	26471-62-5	Invertebrate	Estimated	14 days	NOEC	0.8 mg/l
m-tolylidene diisocyanate	26471-62-5	Medaka	Estimated	28 days	NOEC	40.3 mg/l
zinc oxide	1314-13-2	Activated sludge	Estimated	3 hours	EC50	6.5 mg/l
zinc oxide	1314-13-2	Green algae	Estimated	72 hours	EC50	0.052 mg/l
zinc oxide	1314-13-2	Rainbow trout	Estimated	96 hours	LC50	0.21 mg/l
zinc oxide	1314-13-2	Water flea	Estimated	48 hours	EC50	0.07 mg/l
zinc oxide	1314-13-2	Green algae	Estimated	72 hours	NOEC	0.006 mg/l
zinc oxide	1314-13-2	Water flea	Estimated	7 days	NOEC	0.02 mg/l
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Green algae	Experimental	72 hours	EC50	267 mg/l
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Water flea	Experimental	48 hours	EC50	6.7 mg/l
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Zebra Fish	Experimental	96 hours	LC50	439 mg/l

## 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Glycerol-propylene oxide copolymer with toluene diisocyanate and 1,2 propanediol homopolymer, isocyanate-terminated	68611-34-7	Data not available - insufficient	N/A	N/A	N/A	N/A
Talc	14807-96-6	Data not available - insufficient	N/A	N/A	N/A	N/A
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-	85702-90-5	Data not available - insufficient	N/A	N/A	N/A	N/A

isocyanatohexyl)-10,12-dioxo-2,9,11,13-tetraazonadecanethioate						
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	Experimental Biodegradation	28 days	BOD	100 %BOD/Th BOD	OECD 301C - MITI test (I)
Iron(III) oxide	Mixture	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not availbl-insufficient	N/A	N/A	N/A	N/A
m-tolylidene diisocyanate	26471-62-5	Experimental Photolysis		Photolytic half-life (in air)	4.27 days (t 1/2)	Non-standard method
m-tolylidene diisocyanate	26471-62-5	Estimated Hydrolysis		Hydrolytic half-life	5 days (t 1/2)	Non-standard method
m-tolylidene diisocyanate	26471-62-5	Estimated Biodegradation	14 days	BOD	0 % weight	OECD 301C - MITI test (I)
zinc oxide	1314-13-2	Data not availbl-insufficient	N/A	N/A	N/A	N/A
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Estimated Hydrolysis		Hydrolytic half-life	53.3 minutes (t 1/2)	Non-standard method

### 12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Glycerol-propylene oxide copolymer with toluene diisocyanate and 1,2 propanediol homopolymer, isocyanate-terminated	68611-34-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Talc	14807-96-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-isocyanatohexyl)-10,12-dioxo-2,9,11,13-tetraazonadecanethioate	85702-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	Experimental Bioconcentration		Log Kow	0.74	Non-standard method
Iron(III) oxide	Mixture	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Quartz	14808-60-7	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF - Carp	42 days	Bioaccumulation factor	9.6	Non-standard method
m-tolylidene diisocyanate	26471-62-5	Estimated BCF - Carp	42 days	Bioaccumulation factor	<50	OECD 305C-Bioaccum degree fish
zinc oxide	1314-13-2	Experimental BCF - Carp	56 days	Bioaccumulation factor	≤217	OECD 305E - Bioaccumulation flow-through fish test
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Estimated Bioconcentration		Log Kow	0.25	Estimated: Octanol-water partition coefficient

### 12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	Estimated Mobility in Soil	Koc	10 l/kg	Episuite™

m-tolylidene diisocyanate	26471-62-5	Estimated Mobility in Soil	Koc	7,400 l/kg	Episuite™
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## 12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

## 12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

## 12.7. Other adverse effects

Material	CAS Nbr	Ozone Depletion Potential	Global Warming Potential
(gamma-mercaptopropyl)trimethoxysilane	4420-74-0	0	

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

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

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor.

## EU waste code (product as sold)

08 04 09\* Waste adhesives and sealants containing organic solvents or other dangerous substances  
20 01 27\* Paint, inks, adhesives and resins containing dangerous substances

# SECTION 14: Transportation information

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
<b>14.1 UN number or ID number</b>	UN3077	UN3077	UN3077
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC OXIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC OXIDE)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(ZINC OXIDE)
<b>14.3 Transport hazard class(es)</b>	9	9	9



<b>14.4 Packing group</b>	III	III	III
<b>14.5 Environmental hazards</b>	Environmentally Hazardous	Not applicable	Marine Pollutant
<b>14.6 Special precautions for user</b>	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
<b>14.7 Marine Transport in bulk according to IMO instruments</b>	No data available.	No data available.	No data available.
<b>Control Temperature</b>	No data available.	No data available.	No data available.
<b>Emergency Temperature</b>	No data available.	No data available.	No data available.
<b>ADR Classification Code</b>	M7	Not applicable.	Not applicable.
<b>IMDG Segregation Code</b>	Not applicable.	Not applicable.	NONE

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

## SECTION 15: Regulatory information

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

#### Carcinogenicity

<u><b>Ingredient</b></u>	<u><b>CAS Nbr</b></u>	<u><b>Classification</b></u>	<u><b>Regulation</b></u>
Iron(III) oxide	Mixture	Gr. 3: Not classifiable	International Agency for Research on Cancer
Quartz	14808-60-7	Grp. 1: Carcinogenic to humans	International Agency for Research on Cancer
Titanium dioxide	13463-67-7	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
m-tolyldiene diisocyanate	26471-62-5	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
m-tolyldiene diisocyanate	26471-62-5	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

#### Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

<u><b>Ingredient</b></u>	<u><b>CAS Nbr</b></u>
m-tolyldiene diisocyanate	26471-62-5

Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

**Global inventory status**

Contact 3M for more information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. The components of this product are in compliance with the new substance notification requirements of CEPA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

**DIRECTIVE 2012/18/EU**

Seveso hazard categories, Annex 1, Part 1

None

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
Alkyl Isocyanate Silane	85702-90-5	10	50
toluene	108-88-3	10	50
m-tolylidene diisocyanate	26471-62-5	50	200
zinc oxide	1314-13-2	100	200

**15.2. Chemical Safety Assessment**

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

**SECTION 16: Other information****List of relevant H statements**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H351i	Suspected of causing cancer by inhalation.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Revision information:**

CLP: Ingredient table information was modified.

Label: CLP Classification information was modified.

Section 02: Regulation (EU) 2020/1149 Statement information was modified.  
Section 3: Composition/ Information of ingredients table information was modified.  
Section 8: Occupational exposure limit table information was modified.  
OEL Reg Agency Desc information was modified.  
Section 09: Kinematic Viscosity information information was modified.  
Section 11: Acute Toxicity table information was modified.  
Section 11: Aspiration Hazard Table information was deleted.  
Section 11: Aspiration Hazard text information was added.  
Section 11: Carcinogenicity Table information was modified.  
Section 11: Germ Cell Mutagenicity Table information was modified.  
Section 11: Reproductive Toxicity Table information was modified.  
Section 11: Serious Eye Damage/Irritation Table information was modified.  
Section 11: Skin Corrosion/Irritation Table information was modified.  
Section 11: Skin Sensitization Table information was modified.  
Section 11: Target Organs - Repeated Table information was added.  
Section 11: Target Organs - Repeated Table information was deleted.  
Section 11: Target Organs - Single Table information was modified.  
Section 12: Component ecotoxicity information information was modified.  
Section 12: Mobility in soil information information was modified.  
Section 12: Persistence and Degradability information information was modified.  
Section 12: Biocumulative potential information information was modified.  
Section 14 Classification Code – Regulation Data information was modified.  
Section 14 Control Temperature – Regulation Data information was modified.  
Section 14 Emergency Temperature – Regulation Data information was modified.  
Section 14 Hazard Class + Sub Risk – Regulation Data information was modified.  
Section 14 Hazardous/Not Hazardous for Transportation information was deleted.  
Section 14 Multiplier – Main Heading information was deleted.  
Section 14 Multiplier – Regulation Data information was deleted.  
Section 14 Other Dangerous Goods – Regulation Data information was modified.  
Section 14 Packing Group – Regulation Data information was modified.  
Section 14 Proper Shipping Name information was modified.  
Section 14 Segregation – Regulation Data information was modified.  
Section 14 Transport Category – Main Heading information was deleted.  
Section 14 Transport Category – Regulation Data information was deleted.  
Section 14 Transport in bulk – Regulation Data information was modified.  
Section 14 Marine transport in bulk according to IMO instruments – Main Heading information was modified.  
Section 14 Transport Not Permitted – Main Heading information was deleted.  
Section 14 Transport Not Permitted – Regulation Data information was deleted.  
Section 14 Tunnel Code – Main Heading information was deleted.  
Section 14 Tunnel Code – Regulation Data information was deleted.  
Section 14 UN Number Column data information was modified.  
Section 14 UN Number information was modified.  
Section 15: Carcinogenicity information information was modified.  
Section 15: Regulations - Inventories information was added.  
Section 15: Restrictions on manufacture ingredients information information was modified.  
Section 15: Seveso Substance Text information was added.  
Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material.  
information was modified.  
Section 2: No PBT/vPvB information available warning information was added.

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 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. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union,

you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

**3M Ireland MSDSs are available at [www.3M.com](http://www.3M.com)**