



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 5200 Adhesive Sealant White

Product Identification Numbers

UU-0036-4221-0 UU-0036-4223-6

7100082715 7100082716

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

Identified uses

Marine Adhesive Sealant

1.3. Details of the supplier of the safety data sheet

Address: 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.
Telephone: +44 (0)1344 858 000
E Mail: tox.uk@mmm.com
Website: www.3M.com/uk

1.4. Emergency telephone number

+44 (0)1344 858 000

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

CLASSIFICATION:

Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334

Skin Sensitization, Category 1 - Skin Sens. 1; H317

Hazardous to the Aquatic Environment (Chronic), Category 2 - Aquatic Chronic 2; H411

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols:

GHS08 (Health Hazard) |GHS09 (Environment) |

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-tetraazanadecanethioate	85702-90-5	402-290-8	0.5 - 1.5
3-Trimethoxysilylpropane-1-thiol	4420-74-0	224-588-5	< 0.19
m-tolylidene diisocyanate	26471-62-5	247-722-4	< 0.03
Hexamethylene diisocyanate	822-06-0	212-485-8	< 0.015

HAZARD STATEMENTS:

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P261A	Avoid breathing vapours.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

Response:

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

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.

<=125 ml Precautionary statements

Prevention:

P261A	Avoid breathing vapours.
P284A	In case of inadequate ventilation wear respiratory protection.
P280E	Wear protective gloves.

3M Marine 5200 Adhesive Sealant White**Response:**

P304 + P340

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P342 + P311

If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

P333 + P313

If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EC No.	REACH Registration No.	% by Wt	Classification
Glycerol-propylene oxide copolymer with toluene diisocyanate and 1,2 propanediol homopolymer, isocyanate-terminated	68611-34-7			30 - 60	Substance not classified as hazardous
Talc	14807-96-6	238-877-9		15 - 40	Substance with a Community level exposure limit in the workplace
Titanium dioxide	13463-67-7	236-675-5	01-2119489379-17	5 - 10	Substance with a Community level exposure limit in the workplace
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5			0.5 - 5	Substance with a Community level exposure limit in the workplace
Zinc oxide	1314-13-2	215-222-5		1 - 5	Aquatic Acute 1, H400,M=10; Aquatic Chronic 1, H410,M=1
2-(2-Ethoxyethoxy)ethyl acetate	112-15-2	203-940-1		1 - 5	Eye Irrit. 2, H319
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-isocyanatohexyl)-10,12-dioxo-2,9,11,13-tetraazanonadecanethioate	85702-90-5	ELINCS 402-290-8		0.5 - 1.5	Flam. Liq. 3, H226; Resp. Sens. 1, H334; Skin Sens. 1, H317
Methylhexane	25495-88-9			0.3 - 0.4	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336 - Nota 4,C
Heptane	142-82-5	205-563-8		< 0.23	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Acute 1, H400,M=1; Aquatic Chronic 1, H410,M=1 - Nota C
3-Trimethoxysilylpropane-1-thiol	4420-74-0	224-588-5		< 0.19	Skin Sens. 1, H317 Acute Tox. 4, H302; Aquatic Chronic 2, H411
m-tolyldiene diisocyanate	26471-62-5	247-722-4		< 0.03	Acute Tox. 1, H330; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1A, H334; Skin Sens. 1A, H317;

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					Carc. 2, H351; STOT SE 3, H335; Aquatic Chronic 3, H412 - Nota C
Hexamethylene diisocyanate	822-06-0	212-485-8		< 0.015	Acute Tox. 2, H330; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Resp. Sens. 1A, H334; Skin Sens. 1A, H317; STOT SE 3, H335 - Nota 2

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

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

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. Extinguishing media**

In case of fire: Use a carbon dioxide or dry chemical extinguisher to extinguish.

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.
Oxides of sulphur.

Condition

During combustion.
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.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. 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. Avoid breathing 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. Keep cool. Protect from sunlight. 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
Silicon dioxide	112945-52-5	UK HSC	TWA(as inhalable dust):6 mg/m ³ ;TWA(as respirable dust):2.4 mg/m ³	
Titanium dioxide	13463-67-7	UK HSC	TWA(Inhalable):10 mg/m ³ ;TWA(respirable):4 mg/m ³	
Heptane	142-82-5	UK HSC	TWA:2085 mg/m ³ (500 ppm)	
Talc	14807-96-6	UK HSC	TWA(as respirable dust):1 mg/m ³	
DUST, INERT OR NUISANCE	14807-96-6	UK HSC	TWA(as inhalable dust):10	

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Free isocyanates	26471-62-5	Manufacturer determined	mg/m ³ TWA:0.005 ppm;STEL:0.02	
Free isocyanates	26471-62-5	UK HSC	ppm TWA(as NCO):0.02 mg/m ³ ;STEL(as NCO):0.07	Respiratory Sensitizer
Free isocyanates	822-06-0	Manufacturer determined	mg/m ³ TWA:0.005 ppm;STEL:0.02	
Free isocyanates	822-06-0	UK HSC	ppm TWA(as NCO):0.02 mg/m ³ ;STEL(as NCO):0.07	Respiratory Sensitizer

UK HSC : UK Health and Safety Commission
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.

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:

Indirect vented goggles.

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

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.

Applicable Norms/Standards

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	Solid.
Specific Physical Form:	Paste
Appearance/Odour	White
Odour threshold	<i>No data available.</i>
pH	<i>No data available.</i>
Boiling point/boiling range	<i>No data available.</i>
Melting point	<i>No data available.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>
Flammable Limits(LEL)	<i>No data available.</i>
Flammable Limits(UEL)	<i>No data available.</i>
Vapour pressure	<i>No data available.</i>
Relative density	1.36 [Ref Std: WATER=1]
Water solubility	<i>No data available.</i>
Solubility- non-water	<i>No data available.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>No data available.</i>
Vapour density	<i>No data available.</i>
Decomposition temperature	<i>No data available.</i>
Viscosity	100,000 - 500,000 mPa-s
Density	1.36 g/ml

9.2. Other information

Molecular weight	<i>No data available.</i>
Percent volatile	2.9 % weight

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

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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 3M assessments.

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.

Skin contact

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 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	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
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

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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
Methylhexane	Dermal	Rabbit	LD50 3,000 mg/kg
Methylhexane	Inhalation-Vapour (4 hours)	Rat	LC50 > 80 mg/l
Methylhexane	Ingestion	Rat	LD50 17,000 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
3-Trimethoxysilylpropane-1-thiol	Dermal	Rabbit	LD50 2,270 mg/kg
3-Trimethoxysilylpropane-1-thiol	Ingestion	Rat	LD50 770 mg/kg
m-tolyldiene diisocyanate	Inhalation-Vapour (4 hours)	Mouse	LC50 0.12 mg/l
m-tolyldiene diisocyanate	Dermal	Rabbit	LD50 > 9,400 mg/kg
m-tolyldiene diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.35 mg/l
m-tolyldiene diisocyanate	Ingestion	Rat	LD50 > 5,000 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
Talc	Rabbit	No significant irritation
Titanium dioxide	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
Methylhexane	Rabbit	Minimal irritation
Heptane	Human	Mild irritant
m-tolyldiene diisocyanate	Rabbit	Irritant
Hexamethylene diisocyanate	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Talc	Rabbit	No significant irritation
Titanium dioxide	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

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Methylhexane	Rabbit	No significant irritation
Heptane	Professional judgement	Moderate irritant
m-tolylidene diisocyanate	Rabbit	Corrosive
Hexamethylene diisocyanate	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
Titanium dioxide	Human and animal	Not classified
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
m-tolylidene diisocyanate	Human and animal	Sensitising
Hexamethylene diisocyanate	Multiple animal species	Sensitising

Respiratory Sensitisation

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

Germ Cell Mutagenicity

Name	Route	Value
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	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
Heptane	In Vitro	Not mutagenic
m-tolylidene diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Hexamethylene diisocyanate	In Vitro	Not mutagenic
Hexamethylene diisocyanate	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Talc	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Titanium dioxide	Ingestion	Multiple animal species	Not carcinogenic

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Titanium dioxide	Inhalation	Rat	Carcinogenic.
Synthetic amorphous silica, fumed, crystalline-free	Not specified.	Mouse	Some positive data exist, but the data are not sufficient for classification
m-tolyldiene diisocyanate	Inhalation	Human and animal	Not carcinogenic
m-tolyldiene diisocyanate	Ingestion	Multiple animal species	Carcinogenic.
Hexamethylene diisocyanate	Inhalation	Rat	Not 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-tolyldiene diisocyanate	Inhalation	Not classified for female reproduction	Rat	NOAEL 0.002 mg/l	2 generation
m-tolyldiene diisocyanate	Inhalation	Not classified for male reproduction	Rat	NOAEL 0.002 mg/l	2 generation
m-tolyldiene diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
Hexamethylene diisocyanate	Inhalation	Not classified for female reproduction	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene diisocyanate	Inhalation	Not classified for male reproduction	Rat	NOAEL 0.014 mg/l	4 weeks

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
Methylhexane	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Rat	NOAEL 4 mg/l	4 hours
Methylhexane	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Not available	NOAEL Not available	not available
Methylhexane	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Not available	NOAEL Not available	
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	

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m-tolylidene diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure
Hexamethylene diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
Hexamethylene diisocyanate	Inhalation	blood	Not classified	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	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis respiratory system	Not classified	Rat	NOAEL 18 mg/m ³	113 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
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
Heptane	Inhalation	liver nervous system kidney and/or bladder	Not classified	Rat	NOAEL 12 mg/l	26 weeks
m-tolylidene diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL 0 mg/l	occupational exposure
Hexamethylene diisocyanate	Inhalation	liver kidney and/or bladder	Not classified	Rat	NOAEL 0.002 mg/l	3 weeks
Hexamethylene diisocyanate	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.0014 mg/l	4 weeks
Hexamethylene diisocyanate	Inhalation	blood	Not classified	Rat	NOAEL 0.0012 mg/l	2 years
Hexamethylene diisocyanate	Inhalation	nervous system	Not classified	Rat	NOAEL 0.002 mg/l	7 weeks
Hexamethylene diisocyanate	Inhalation	heart	Not classified	Rat	NOAEL 0.001 mg/l	90 days

Aspiration Hazard

Name	Value
Methylhexane	Aspiration hazard
Heptane	Aspiration hazard

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 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.

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12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
2-(2-Ethoxyethoxy) ethyl acetate	112-15-2	Fathead minnow	Experimental	96 hours	LC50	110 mg/l
Glycerol-propylene oxide copolymer with toluene diisocyanate and 1,2 propanediol homopolymer, isocyanate-terminated	68611-34-7		Data not available or insufficient for classification			
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Green algae	Experimental	72 hours	EC50	267 mg/l
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Zebra Fish	Experimental	96 hours	LC50	439 mg/l
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Water flea	Experimental	48 hours	EC50	6.7 mg/l
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-isocyanatohexyl)-10,12-dioxo-2,9,11,13-tetraazanonadecanethioate	85702-90-5		Data not available or insufficient for classification			
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Green Algae	Experimental	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	Zebra Fish	Experimental	96 hours	LC50	>100 mg/l
Synthetic amorphous	112945-52-5	Water flea	Experimental	24 hours	EC50	>100 mg/l

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silica, fumed, crystalline-free						
Zinc oxide	1314-13-2	Chinook Salmon	Experimental	96 hours	LC50	0.23 mg/l
Zinc oxide	1314-13-2	Water flea	Experimental	48 hours	EC50	3.2 mg/l
Zinc oxide	1314-13-2	Green Algae	Experimental	72 hours	EC50	0.046 mg/l
Zinc oxide	1314-13-2	Green Algae	Experimental	72 hours	NOEC	0.021 mg/l
Heptane	142-82-5	Water flea	Experimental	48 hours	EC50	1.5 mg/l
Heptane	142-82-5	Water flea	Estimated	21 days	NOEC	0.17 mg/l
Hexamethylene diisocyanate	822-06-0	Green Algae	Estimated	72 hours	NOEC	10 mg/l
Hexamethylene diisocyanate	822-06-0	Ricefish	Estimated	96 hours	LC50	71 mg/l
Hexamethylene diisocyanate	822-06-0	Water flea	Estimated	21 days	NOEC	4.2 mg/l
Hexamethylene diisocyanate	822-06-0	Green Algae	Estimated	96 hours	EC50	14.8 mg/l
Hexamethylene diisocyanate	822-06-0	Water flea	Estimated	48 hours	EC50	27 mg/l
Methylhexane	25495-88-9		Data not available or insufficient for classification			
Talc	14807-96-6		Data not available or insufficient for classification			
Titanium dioxide	13463-67-7	Fish	Experimental	30 days	NOEC	>100 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	30 days	NOEC	3 mg/l
Titanium dioxide	13463-67-7	Water flea	Experimental	48 hours	EC50	>100 mg/l
Titanium dioxide	13463-67-7	Sheepshead Minnow	Experimental	96 hours	LC50	>240 mg/l
m-tolyldiene diisocyanate	26471-62-5	Green Algae	Estimated	96 hours	EC50	9.54 mg/l
m-tolyldiene diisocyanate	26471-62-5	Ricefish	Estimated	28 days	NOEC	40.3 mg/l
m-tolyldiene diisocyanate	26471-62-5	Crustacea other	Estimated	14 days	NOEC	0.8 mg/l
m-tolyldiene diisocyanate	26471-62-5	Water flea	Estimated	48 hours	EC50	1.6 mg/l
m-tolyldiene diisocyanate	26471-62-5	Zebra Fish	Estimated	96 hours	LC50	392 mg/l

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2-(2-Ethoxyethoxy) ethyl acetate	112-15-2	Experimental Biodegradation	28 days	BOD	100 % weight	OECD 301C - MITI test (I)
Synthetic amorphous	112945-52-5	Data not available or	N/A	N/A	N/A	N/A

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silica, fumed, crystalline-free		insufficient for classification				
Zinc oxide	1314-13-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	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 % BOD/ThBOD	OECD 301C - MITI test (I)
Heptane	142-82-5	Experimental Photolysis		Photolytic half-life (in air)	4.24 days (t 1/2)	Other methods
Talc	14807-96-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Methylhexane	25495-88-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
m-tolylidene diisocyanate	26471-62-5	Estimated Biodegradation	14 days	BOD	0 % weight	OECD 301C - MITI test (I)
m-tolylidene diisocyanate	26471-62-5	Estimated Hydrolysis		Hydrolytic half-life	5 days (t 1/2)	Other methods
m-tolylidene diisocyanate	26471-62-5	Experimental Photolysis		Photolytic half-life (in air)	4.27 days (t 1/2)	Other methods
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Estimated Hydrolysis		Hydrolytic half-life	53.3 minutes (t 1/2)	Other methods
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
Hexamethylene diisocyanate	822-06-0	Estimated Biodegradation	14 days	BOD	55.5 % weight	OECD 301C - MITI test (I)
Hexamethylene diisocyanate	822-06-0	Experimental Hydrolysis		Hydrolytic half-life	5 minutes (t 1/2)	Other methods
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-isocyanatohexyl)-10,12-dioxo-2,9,11,13-	85702-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

3M Marine 5200 Adhesive Sealant White

tetraazanonade canethioate						
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12.3 : Bioaccumulative potential

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
2-(2-Ethoxyethoxy) ethyl acetate	112-15-2	Estimated Bioconcentration		Log Kow	0.32	Estimated: Octanol-water partition coefficient
Synthetic amorphous silica, fumed, crystalline-free	112945-52-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Zinc oxide	1314-13-2	Experimental BCF-Carp	56 days	Bioaccumulation factor	<217	OECD 305E - Bioaccumulation flow-through fish test
Titanium dioxide	13463-67-7	Experimental BCF-Carp	42 days	Bioaccumulation factor	9.6	Other methods
Heptane	142-82-5	Estimated Bioconcentration		Bioaccumulation factor	105	Estimated: Bioconcentration factor
Talc	14807-96-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Methylhexane	25495-88-9	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
m-tolyldiene diisocyanate	26471-62-5	Estimated BCF-Carp	42 days	Bioaccumulation factor	<50	OECD 305C-Bioaccum degree fish
3-Trimethoxysilylpropane-1-thiol	4420-74-0	Estimated Bioconcentration		Log Kow	0.25	Estimated: Octanol-water partition coefficient
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
Hexamethylene diisocyanate	822-06-0	Estimated Bioconcentration		Log Kow	0.02	Other methods
S-(3-trimethoxysilyl)propyl 19-isocyanato-11-(6-isocyanatohexy	85702-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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1)-10,12-dioxo- 2,9,11,13- tetraazonade canethioate						
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12.4. Mobility in soil

Please contact manufacturer for more details

12.5. Results of the PBT and vPvB assessment

No information available at this time, contact manufacturer for more details

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

See Section 11.1 Information on toxicological effects

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. 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

UU-0036-4221-0, UU-0036-4223-6

ADR/RID: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION 375, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXEMPTION, III, --.

IMDG-CODE: UN3082, NOT RESTRICTED AS PER IMDG CODE 2.10.2.7, MARINE POLLUTANT EXCEPTION, III, IMDG-Code segregation code: NONE, EMS: --.

ICAO/IATA: UN3082, NOT RESTRICTED AS PER SPECIAL PROVISION A197, ENVIRONMENTALLY HAZARDOUS SUBSTANCE EXCEPTION, III.

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient

Titanium dioxide

CAS Nbr

13463-67-7

Classification

Grp. 2B: Possible human

Regulation

International Agency

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m-tolylidene diisocyanate	26471-62-5	carc. Carc. 2	for Research on Cancer Regulation (EC) No. 1272/2008, Table 3.1
m-tolylidene diisocyanate	26471-62-5	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Global inventory status

Contact 3M for more 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. The components of this product are in compliance with the chemical notification requirements of TSCA. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory.

15.2. Chemical Safety Assessment

Not applicable

SECTION 16: Other information

List of relevant H statements

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
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:

Section 8: Occupational exposure limit table information was modified.
Section 12: Component ecotoxicity information information was modified.
Section 12: Persistence and Degradability information information was modified.
Section 12: Biocumulative potential information information was modified.
Section 15: Carcinogenicity information information was modified.

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.

3M United Kingdom MSDSs are available at www.3M.com/uk