

Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M[™] Marine Adhesive Sealant 5200, 5210 Tan; PN 06501, 6501E

Product Identification Numbers

60-9801-0933-8, 62-5236-5236-0, 62-6501-5230-9 7000045777, 7100176316

1.2. Recommended use and restrictions on use

Recommended use Marine Adhesive Sealant, Sealant

1.3. Supplier's details	
MANUFACTURER:	3M
DIVISION:	Industrial Adhesives and Tapes Division
	Marine & Specialty Vehicle
ADDRESS:	3M Center, St. Paul, MN 55144-1000, USA
Telephone:	1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number

1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

2.1. Hazard classification

Acute Toxicity (inhalation): Category 4. Respiratory Sensitizer: Category 1A. Skin Sensitizer: Category 1A. Reproductive Toxicity: Category 1B. Carcinogenicity: Category 1B.

2.2. Label elements Signal word Danger

Symbols Exclamation mark | Health Hazard |

Pictograms



Hazard Statements

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Harmful if inhaled. May damage fertility or the unborn child. May cause cancer.

Precautionary Statements

General: Keep out of reach of children.

Prevention:

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. Wear protective gloves. Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. IF exposed or concerned: Get medical advice/attention.

Storage:

Store locked up.

Disposal:

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

Supplemental Information:

Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

2% of the mixture consists of ingredients of unknown acute oral toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
Urethane Polymer	68611-34-7	40 - 70 Trade Secret *
Talc	14807-96-6	10 - 30 Trade Secret *
Titanium Dioxide	13463-67-7	3 - 7 Trade Secret *
Carbitol Acetate	112-15-2	1 - 5 Trade Secret *
Iron Magnesium Oxide	12068-86-9	1 - 5 Trade Secret *

Synthetic Amorphous Silica	112945-52-5	1 - 5 Trade Secret *
Zinc Oxide	1314-13-2	< 2.25 Trade Secret *
Alkyl Isocyanate Silane	85702-90-5	0.5 - 1.5 Trade Secret *
Toluene	108-88-3	< 1 Trade Secret *
Toluene Diisocyanate	26471-62-5	< 1 Trade Secret *
Quartz Silica	14808-60-7	< 0.5 Trade Secret *
Heptane	142-82-5	< 0.3 Trade Secret *
(GAMMA-	4420-74-0	< 0.2 Trade Secret *
MERCAPTOPROPYL)TRIMETHOXYSILANE		
Xylene	1330-20-7	< 0.2 Trade Secret *
Dibutyltin Dilaurate	77-58-7	< 0.15 Trade Secret *
Zinc	7440-66-6	< 0.025 Trade Secret *

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

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

Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). 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. Suitable 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

<u>Substance</u>	<u>Condition</u>
Isocyanates	During Combustion
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion

Irritant Vapors or Gases Oxides of Nitrogen During Combustion 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 dikes 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 authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

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/vapors/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 (gloves, respirators, etc.) 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
Toluene	108-88-3	ACGIH	TWA:20 ppm	A4: Not class. as human
				carcin, Ototoxicant
Toluene	108-88-3	OSHA	TWA:200 ppm;CEIL:300 ppm	
SILICA, AMORPHOUS	112945-52-	OSHA	TWA:20 millions of	
	5		particles/cu. ft.;TWA	

			concentration:0.8 mg/m3	
Zinc Oxide	1314-13-2	ACGIH	TWA(respirable fraction):2	
			mg/m3;STEL(respirable	
			fraction):10 mg/m3	
Zinc Oxide	1314-13-2	OSHA	TWA(as total dust):15	
			mg/m3;TWA(respirable	
			fraction):5 mg/m3;TWA(as	
			fume):5 mg/m3	
Xylene	1330-20-7	ACGIH	TWA:100 ppm;STEL:150 ppm	A4: Not class. as human
-				carcin
Xylene	1330-20-7	OSHA	TWA:435 mg/m3(100 ppm)	
Titanium Dioxide	13463-67-7	ACGIH	TWA:10 mg/m3	A4: Not class. as human
			C C	carcin
Titanium Dioxide	13463-67-7	OSHA	TWA(as total dust):15 mg/m3	
Heptane	142-82-5	ACGIH	TWA:400 ppm;STEL:500 ppm	
Heptane	142-82-5	OSHA	TWA:2000 mg/m3(500 ppm)	
Talc	14807-96-6	ACGIH	TWA(respirable fraction):2	A4: Not class. as human
			mg/m3	carcin
TALC	14807-96-6	OSHA	TWA - Use asbestos limits:	
Talc	14807-96-6	OSHA	TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.);TWA:20	
			millions of particles/cu. ft.	
Quartz Silica	14808-60-7	ACGIH	TWA(respirable	A2: Suspected human
			fraction):0.025 mg/m3	carcin.
Quartz Silica	14808-60-7	OSHA	TWA Table Z-	
			1(respirable):0.05	
			mg/m3;TWA Table Z-	
			3(respirable):0.1 mg/m3;TWA	
			concentration(respirable):0.1	
			mg/m3(2.4 millions of	
			particles/cu. ft.)	
Toluene Diisocyanate	26471-62-5	ACGIH	TWA(inhalable fraction and	A3: Confirmed animal
-			vapor):0.001	carcin.,
			ppm;STEL(inhalable fraction	Dermal/Respiratory
			and vapor):0.005 ppm	Sensitizer
TIN, ORGANIC COMPOUNDS	77-58-7	ACGIH	TWA(as Sn):0.1	A4: Not class. as human
			mg/m3;STEL(as Sn):0.2	carcin, SKIN
			mg/m3	
TIN, ORGANIC COMPOUNDS	77-58-7	OSHA	TWA(as Sn):0.1 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists

AIHA : American Industrial Hygiene Association

CMRG : Chemical Manufacturer's Recommended Guidelines

OSHA : United States Department of Labor - Occupational Safety and Health Administration

TWA: Time-Weighted-Average

STEL: Short Term Exposure Limit

CEIL: Ceiling

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/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

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

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 vapors and particulates Half facepiece or full facepiece supplied-air respirator

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state	Liquid
Color	Tan
Specific Physical Form:	Paste
Odor	Urethane
Odor threshold	No Data Available
рН	Not Applicable
Melting point	No Data Available
Boiling Point	Not Applicable
Flash Point	No flash point
Evaporation rate	No Data Available
Flammability (solid, gas)	Not Applicable
Flammable Limits(LEL)	Not Applicable
Flammable Limits(UEL)	Not Applicable
Vapor Pressure	No Data Available
Vapor Density	No Data Available
Density	1.3 g/ml
Specific Gravity	1.3 [<i>Ref Std</i> :WATER=1]
Solubility in Water	Nil
Solubility- non-water	No Data Available
Partition coefficient: n-octanol/ water	No Data Available
Autoignition temperature	No Data Available

Decomposition temperature Viscosity Hazardous Air Pollutants Molecular weight VOC Less H2O & Exempt Solvents VOC Less H2O & Exempt Solvents No Data Available 100,000 - 500,000 centipoise <=0.1 % weight [*Test Method*:Calculated] No Data Available 38 g/l [*Test Method*:tested per EPA method 24] 2.9 % [*Test Method*: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. Possibility of hazardous reactions

Hazardous polymerization 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

None known.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

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.

Condition

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 diarrhea.

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.

Ingredient	CAS No.	Class Description	Regulation
Silica, Crystalline (Respirable Size)	14808-60-7	Known To Be Human Carcinogen.	National Toxicology Program Carcinogens
Silica dust, crystalline, in the form of quartz or cristobalite	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
Toluene Diisocyanate	26471-62-5	Anticipated human carcinogen	National Toxicology Program Carcinogens
Toluene diisocyanates	26471-62-5	Grp. 2B: Possible human carc.	International Agency for Research on Cancer

Additional Information:

Persons previously sensitized to isocyanates may develop a cross-sensitization 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	Inhalation- Vapor(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
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
Synthetic Amorphous Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Synthetic Amorphous Silica	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Synthetic Amorphous Silica	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

Carbitol Acetate	Dermal	Rabbit	LD50 15,000 mg/kg
Carbitol Acetate	Ingestion	Rat	LD50 11,000 mg/kg
Toluene	Dermal	Rat	LD50 12,000 mg/kg
Toluene	Inhalation-	Rat	LC50 30 mg/l
	Vapor (4		
	hours)		
Toluene	Ingestion	Rat	LD50 5,550 mg/kg
Toluene Diisocyanate	Inhalation-	Mouse	LC50 0.12 mg/l
	Vapor (4		
T 1 D ''	hours)	D 111	
Toluene Diisocyanate	Dermal	Rabbit	LD50 > 9,400 mg/kg
Toluene Diisocyanate	Inhalation- Dust/Mist	Rat	LC50 0.35 mg/l
	(4 hours)		
Toluene Diisocyanate	Ingestion	Rat	LD50 > 5,000 mg/kg
Heptane	Dermal	Rabbit	LD50 3,000 mg/kg
Heptane	Inhalation-	Rat	LC50 103 mg/l
Teptane	Vapor (4	Rat	LC50 105 llg/l
	hours)		
Heptane	Ingestion	Rat	LD50 > 15,000 mg/kg
Quartz Silica	Dermal		LD50 estimated to be > 5,000 mg/kg
Quartz Silica	Ingestion		LD50 estimated to be > 5,000 mg/kg
(GAMMA-MERCAPTOPROPYL)TRIMETHOXYSILANE	Dermal	Rabbit	LD50 2,270 mg/kg
(GAMMA-MERCAPTOPROPYL)TRIMETHOXYSILANE	Ingestion	Rat	LD50 770 mg/kg
Dibutyltin Dilaurate	Dermal	Rat	LD50 > 2,000 mg/kg
Dibutyltin Dilaurate	Ingestion	Rat	LD50 1,290 mg/kg
Xylene	Dermal	Rabbit	LD50 > 4,200 mg/kg
Xylene	Inhalation-	Rat	LC50 29 mg/l
	Vapor (4		
	hours)		
Xylene	Ingestion	Rat	LD50 3,523 mg/kg
Zinc	Dermal	Professio	LD50 estimated to be $> 5,000 \text{ mg/kg}$
		nal	
		judgeme nt	
Zinc	Inhalation-	Rat	LC50 > 5.41 mg/l
	Dust/Mist	ivai	
	(4 hours)		
Zinc	Ingestion	Rat	LD50 > 2,000 mg/kg
	Ingestion	Kat	LD30 > 2,000 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	Rabbit	No significant irritation
Zinc Oxide	Human	No significant irritation
	and	
	animal	
Carbitol Acetate	Human	Minimal irritation
	and	
	animal	
Toluene	Rabbit	Irritant
Toluene Diisocyanate	Rabbit	Irritant
Heptane	Human	Mild irritant
Quartz Silica	Professio	No significant irritation
	nal	
	judgeme	
	nt	
(GAMMA-MERCAPTOPROPYL)TRIMETHOXYSILANE	Rabbit	No significant irritation
Dibutyltin Dilaurate	Rabbit	Corrosive
Xylene	Rabbit	Mild irritant

Serious Eye Damage/Irritation

Name	Species	Value
Talc	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Synthetic Amorphous Silica	Rabbit	No significant irritation
Zinc Oxide	Rabbit	Mild irritant
Carbitol Acetate	Rabbit	Severe irritant
Toluene	Rabbit	Moderate irritant
Toluene Diisocyanate	Rabbit	Corrosive
Heptane	Professio	Moderate irritant
	nal	
	judgeme	
	nt	
(GAMMA-MERCAPTOPROPYL)TRIMETHOXYSILANE	Rabbit	No significant irritation
Dibutyltin Dilaurate	Rabbit	Corrosive
Xylene	Rabbit	Mild irritant
Zinc	Rabbit	No significant irritation

Skin Sensitization

Name	Species	Value
Titanium Dioxide	Human	Not classified
	and	
	animal	
Synthetic Amorphous Silica	Human	Not classified
	and	
	animal	
Zinc Oxide	Guinea	Not classified
	pig	
Carbitol Acetate	Human	Not classified
	and	
	animal	
Toluene	Guinea	Not classified
	pig	
Toluene Diisocyanate	Human	Sensitizing
	and	
	animal	
(GAMMA-MERCAPTOPROPYL)TRIMETHOXYSILANE	Guinea	Sensitizing
	pig	
Dibutyltin Dilaurate	Guinea	Sensitizing
	pig	

Respiratory Sensitization

Name	Species	Value
Talc	Human	Not classified
Toluene Diisocyanate	Human	Sensitizing

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	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
Carbitol Acetate	In Vitro	
Caronor Acetate	III VIUO	Not mutagenic
Toluene	In Vitro	Not mutagenic
Toluene	In vivo	Not mutagenic

Toluene Diisocyanate	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
Heptane	In Vitro	Not mutagenic
Quartz Silica	In Vitro	Some positive data exist, but the data are not sufficient for classification
Quartz Silica	In vivo	Some positive data exist, but the data are not sufficient for classification
(GAMMA-MERCAPTOPROPYL)TRIMETHOXYSILANE	In Vitro	Not mutagenic
Dibutyltin Dilaurate	In Vitro	Some positive data exist, but the data are not
		sufficient for classification
Dibutyltin Dilaurate	In vivo	Mutagenic
Xylene	In Vitro	Not mutagenic
Xylene	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
Titanium Dioxide	Inhalation	Rat	Carcinogenic
Synthetic Amorphous Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Dermal	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene	Ingestion	Rat	Some positive data exist, but the data are not sufficient for classification
Toluene	Inhalation	Mouse	Some positive data exist, but the data are not sufficient for classification
Toluene Diisocyanate	Inhalation	Human and animal	Not carcinogenic
Toluene Diisocyanate	Ingestion	Multiple animal species	Carcinogenic
Quartz Silica	Inhalation	Human and animal	Carcinogenic
Xylene	Dermal	Rat	Not carcinogenic
Xylene	Ingestion	Multiple animal species	Not carcinogenic
Xylene	Inhalation	Human	Some positive data exist, but the data are not sufficient for classification

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 organogenesi s
Synthetic Amorphous Silica	Ingestion	Not classified for female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Synthetic Amorphous Silica	Ingestion	Not classified for male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Synthetic Amorphous Silica	Ingestion	Not classified for development	Rat	NOAEL 1,350 mg/kg/day	during organogenesi s
Zinc Oxide	Ingestion	Not classified for reproduction and/or development	Multiple animal species	NOAEL 125 mg/kg/day	premating & during gestation
Toluene	Inhalation	Not classified for female reproduction	Human	NOAEL Not	occupational

				available	exposure
Toluene	Inhalation	Not classified for male reproduction	Rat	NOAEL 2.3 mg/l	1 generation
Toluene	Ingestion	Toxic to development	Rat	LOAEL 520 mg/kg/day	during gestation
Toluene	Inhalation	Toxic to development	Human	NOAEL Not available	poisoning and/or abuse
Toluene Diisocyanate	Inhalation	Not classified for female reproduction	Rat	NOAEL 0.002 mg/l	2 generation
Toluene Diisocyanate	Inhalation	Not classified for male reproduction	Rat	NOAEL 0.002 mg/l	2 generation
Toluene Diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesi s
Dibutyltin Dilaurate	Ingestion	Toxic to female reproduction	Rat	NOAEL 2 mg/kg/day	premating into lactation
Dibutyltin Dilaurate	Ingestion	Toxic to development	Rat	NOAEL 2.5 mg/kg/day	during gestation
Xylene	Inhalation	Not classified for female reproduction	Human	NOAEL Not available	occupational exposure
Xylene	Ingestion	Not classified for development	Mouse	NOAEL Not available	during organogenesi s
Xylene	Inhalation	Not classified for development	Multiple animal species	NOAEL Not available	during gestation

Lactation

Name	Route	Species	Value
Xylene	Ingestion	Mouse	Not classified for effects on or via lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Carbitol Acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human and animal	NOAEL Not available	not applicable
Carbitol Acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	not applicable
Toluene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Toluene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL 0.004 mg/l	3 hours
Toluene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	poisoning and/or abuse
Toluene Diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure
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	
Dibutyltin Dilaurate	Ingestion	immune system	Causes damage to organs	Rat	LOAEL 5 mg/kg	
Xylene	Inhalation	auditory system	Causes damage to organs	Rat	LOAEL 6.3 mg/l	8 hours

Xylene	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	
Xylene	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
Xylene	Inhalation	eyes	Not classified	Rat	NOAEL 3.5 mg/l	not available
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	eyes	Not classified	Rat	NOAEL 250 mg/kg	not applicable

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/m3	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	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
Carbitol Acetate	Inhalation	respiratory system liver immune system kidney and/or bladder	Not classified	Rat	NOAEL 0.48 mg/l	2 weeks
Toluene	Inhalation	auditory system eyes olfactory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	nervous system	May cause damage to organs though prolonged or repeated exposure	Human	NOAEL Not available	poisoning and/or abuse
Toluene	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 2.3 mg/l	15 months
Toluene	Inhalation	heart liver kidney and/or bladder	Not classified	Rat	NOAEL 11.3 mg/l	15 weeks
Toluene	Inhalation	endocrine system	Not classified	Rat	NOAEL 1.1 mg/l	4 weeks
Toluene	Inhalation	immune system	Not classified	Mouse	NOAEL Not available	20 days
Toluene	Inhalation	bone, teeth, nails, and/or hair	Not classified	Mouse	NOAEL 1.1 mg/l	8 weeks
Toluene	Inhalation	hematopoietic system vascular system	Not classified	Human	NOAEL Not available	occupational exposure
Toluene	Inhalation	gastrointestinal tract	Not classified	Multiple animal species	NOAEL 11.3 mg/l	15 weeks
Toluene	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 625 mg/kg/day	13 weeks
Toluene	Ingestion	heart	Not classified	Rat	NOAEL	13 weeks

					2,500	
Toluene	Ingestion	liver kidney and/or bladder	Not classified	Multiple animal species	mg/kg/day NOAEL 2,500 mg/kg/day	13 weeks
Toluene	Ingestion	hematopoietic system	Not classified	Mouse	NOAEL 600 mg/kg/day	14 days
Toluene	Ingestion	endocrine system	Not classified	Mouse	NOAEL 105 mg/kg/day	28 days
Toluene	Ingestion	immune system	Not classified	Mouse	NOAEL 105 mg/kg/day	4 weeks
Toluene Diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL 0 mg/l	occupational exposure
Heptane	Inhalation	liver nervous system kidney and/or bladder	Not classified	Rat	NOAEL 12 mg/l	26 weeks
Quartz Silica	Inhalation	silicosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Dibutyltin Dilaurate	Ingestion	liver	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 2 mg/kg/day	2 weeks
Dibutyltin Dilaurate	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.3 mg/kg/day	28 days
Xylene	Inhalation	nervous system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.4 mg/l	4 weeks
Xylene	Inhalation	auditory system	May cause damage to organs though prolonged or repeated exposure	Rat	LOAEL 7.8 mg/l	5 days
Xylene	Inhalation	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Inhalation	heart endocrine system gastrointestinal tract hematopoietic system muscles kidney and/or bladder respiratory system	Not classified	Multiple animal species	NOAEL 3.5 mg/l	13 weeks
Xylene	Ingestion	auditory system	Not classified	Rat	NOAEL 900 mg/kg/day	2 weeks
Xylene	Ingestion	kidney and/or bladder	Not classified	Rat	NOAEL 1,500 mg/kg/day	90 days
Xylene	Ingestion	liver	Not classified	Multiple animal species	NOAEL Not available	
Xylene	Ingestion	heart skin endocrine system bone, teeth, nails, and/or hair hematopoietic system immune system nervous system respiratory system	Not classified	Mouse	NOAEL 1,000 mg/kg/day	103 weeks

Aspiration Hazard

Name	Value
Toluene	Aspiration hazard
Heptane	Aspiration hazard
Xylene	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

Ecotoxicological information

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

Chemical fate information

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

SECTION 13: Disposal considerations

13.1. Disposal 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.

EPA Hazardous Waste Number (RCRA): D018 (Benzene), D035 (Methyl ethyl ketone)

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

EPCRA 311/312 Hazard Classifications:

Physical Hazards Not applicable

ealth Hazards
cute toxicity
arcinogenicity
eproductive toxicity
espiratory or Skin Sensitization

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<u>Ingredient</u>	<u>C.A.S. No</u>	<u>% by Wt</u>
Zinc Oxide (ZINC COMPOUNDS)	1314-13-2	Trade Secret < 2.25
Carbitol Acetate (GLYCOL ETHERS)	112-15-2	Trade Secret 1 - 5
Toluene Diisocyanate	26471-62-5	Trade Secret < 1
Toluene Diisocyanate (Benzene, 1,3- diisocyanatomethyl-)	26471-62-5	Trade Secret < 1

This material contains a chemical which requires export notification under TSCA Section 12[b]:

Ingredient (Category if applicable)	<u>C.A.S. No</u>	Regulation	<u>Status</u>
Toluene Diisocyanate (Benzene, 1,3-	26471-62-5	Toxic Substances Control Act (TSCA) 5	Proposed
diisocyanatomethyl-)		SNUR or Consent Order Chemicals	
Toluene Diisocyanate	26471-62-5	Toxic Substances Control Act (TSCA) 5	Proposed
		SNUR or Consent Order Chemicals	
Zinc	7440-66-6	Toxic Substances Control Act (TSCA) 6	Proposed
		Banned or Restricted Use Chemicals	

This material contains a chemical subject to a proposed EPA Significant New Use Rule (TSCA Section 5)

Ingredient (Category if applicable)	<u>C.A.S. No</u>	Reference
Toluene Diisocyanate	26471-62-5	80 FR 2068

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Listing</u>
Toluene diisocyanate	26471-62-5	Carcinogen

15.3. Chemical Inventories

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.

Contact 3M for more information.

15.4. International Regulations

Contact 3M for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: Other information

NFPA Hazard Classification

Health: 2 Flammability: 1 Instability: 1 Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

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