



Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier

3M(TM) Marine Adhesive Sealant 5200, 5210 Tan; PN 06501, 6501E

Product Identification Numbers

60-9801-0933-8, 62-5236-5236-0, KS-9990-0624-4

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

Carcinogenicity: Category 1B.

Reproductive Toxicity: Category 1B.

Specific Target Organ Toxicity (repeated exposure): Category 1.

Respiratory Sensitizer: Category 1A.

Skin Sensitizer: Category 1A.

2.2. Label elements

Signal word

Danger

Symbols

Health Hazard |

Pictograms



Hazard Statements

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

Causes damage to organs through prolonged or repeated exposure:

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.
Do not breathe dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
In case of inadequate ventilation wear respiratory protection.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: If breathing is difficult, 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.
Specific treatment (see Notes to Physician on this label).
Get medical advice/attention if you feel unwell.

Storage:

Store locked up.

Disposal:

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

2.3. Hazards not otherwise classified

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

3% of the mixture consists of ingredients of unknown acute oral toxicity.

7% of the mixture consists of ingredients of unknown acute inhalation toxicity.

SECTION 3: Composition/information on ingredients

Ingredient	C.A.S. No.	% by Wt
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Urethane Prepolymer	68611-34-7	40 - 70
Talc	14807-96-6	10 - 30
Titanium Dioxide	13463-67-7	3 - 7
Carbitol Acetate	112-15-2	1 - 5
Zinc Oxide	1314-13-2	1 - 5
Fumed Silica	112945-52-5	1 - 5
Iron Magnesium Oxide	12068-86-9	1 - 5
Alkyl Isocyanate Silane	85702-90-5	0.5 - 1.5
Toluene Diisocyanate	26471-62-5	< 0.5
Heptane	142-82-5	< 0.3
(Gamma-mercaptopropyl)trimethoxysilane	4420-74-0	< 0.2
Dibutyltin Dilaurate	77-58-7	< 0.15
HMDI	822-06-0	< 0.015

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Remove person to fresh air. If you feel unwell, get medical attention.

Skin Contact:

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye Contact:

Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:

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

4.2. Most important symptoms and effects, both acute and delayed

See Section 11.1. Information on toxicological effects.

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

Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

DO NOT USE WATER

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	During Combustion
Oxides of Nitrogen	During Combustion

5.3. Special protective actions for fire-fighters

No unusual fire or explosion hazards are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. 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

Contain spill. 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 toxic, corrosivity or flammability hazard. 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. Cover, but do not seal for 48 hours. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not use in a confined area with minimal air exchange. 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 (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. Keep cool. Protect from sunlight. Store away from heat. Store in a dry place.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ingredient	C.A.S. No.	Agency	Limit type	Additional Comments
SILICA, AMORPHOUS	112945-52-5	US Dept of Labor - OSHA	TWA concentration:0.8 mg/m3;TWA:20 millions of particles/cu. ft.	
Zinc Oxide	1314-13-2	Amer Conf of Gov. Indust. Hyg.	TWA(respirable fraction):2 mg/m3;STEL(respirable fraction):10 mg/m3	
Zinc Oxide	1314-13-2	US Dept of	TWA(as fume):5	

		Labor - OSHA	mg/m3;TWA(as total dust):15 mg/m3;TWA(respirable fraction):5 mg/m3 TWA:10 mg/m3	
Titanium Dioxide	13463-67-7	Amer Conf of Gov. Indust. Hyg.		
Titanium Dioxide	13463-67-7	Chemical Manufacturer Rec Guid	TWA(as respirable dust):5 mg/m3	
Titanium Dioxide	13463-67-7	US Dept of Labor - OSHA	TWA(as total dust):15 mg/m3	
Heptane	142-82-5	Amer Conf of Gov. Indust. Hyg.	TWA:400 ppm;STEL:500 ppm	
Heptane	142-82-5	US Dept of Labor - OSHA	TWA:2000 mg/m3(500 ppm)	
Talc	14807-96-6	Amer Conf of Gov. Indust. Hyg.	TWA(respirable fraction):2 mg/m3	
Talc	14807-96-6	Chemical Manufacturer Rec Guid	TWA(as respirable dust):0.5 mg/m3	
Talc	14807-96-6	US Dept of Labor - OSHA	TWA concentration(as total dust):0.3 mg/m3;TWA concentration(respirable):0.1 mg/m3(2.4 millions of particles/cu. ft.);TWA:20 millions of particles/cu. ft.	
FREE ISOCYANATES	26471-62-5	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
Toluene Diisocyanate	26471-62-5	Amer Conf of Gov. Indust. Hyg.	TWA:0.005 ppm;STEL:0.02 ppm	Sensitizer
TIN, ORGANIC COMPOUNDS	77-58-7	Amer Conf of Gov. Indust. Hyg.	TWA(as Sn):0.1 mg/m3;STEL(as Sn):0.2 mg/m3	Skin Notation
TIN, ORGANIC COMPOUNDS	77-58-7	US Dept of Labor - OSHA	TWA(as Sn):0.1 mg/m3	
FREE ISOCYANATES	822-06-0	Manufacturer determined	TWA:0.005 ppm;STEL:0.02 ppm	
HMDI	822-06-0	Amer Conf of Gov. Indust. Hyg.	TWA:0.005 ppm	
HMDI	822-06-0	Chemical Manufacturer Rec Guid	CEIL:0.02 ppm	

Amer Conf of Gov. Indust. Hyg. : American Conference of Governmental Industrial Hygienists

American Indust. Hygiene Assoc : American Industrial Hygiene Association

Chemical Manufacturer Rec Guid : Chemical Manufacturer's Recommended Guidelines

US Dept of Labor - 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 with appropriate local exhaust ventilation. 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

Wear 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. Wear protective gloves.

Gloves made from the following material(s) are recommended: Nitrile Rubber

Respiratory protection

In case of inadequate ventilation wear 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

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

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

Partition coefficient: n-octanol/ water	<i>No Data Available</i>
Autoignition temperature	<i>No Data Available</i>
Decomposition temperature	<i>No Data Available</i>
Viscosity	100,000 - 500,000 centipoise
Hazardous Air Pollutants	<=0.1 % weight [<i>Test Method: Calculated</i>]
Volatile Organic Compounds	40 g/l [<i>Test Method: tested per EPA method 24</i>] [<i>Details: EU VOC content</i>]
Percent volatile	2.9 % weight
VOC Less H2O & Exempt Solvents	40 g/l [<i>Test Method: tested per EPA method 24</i>]

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

<u>Substance</u>	<u>Condition</u>
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:

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 target organ effects after inhalation.

Skin Contact:

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

Prolonged or repeated exposure may cause:

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. Vapors released during curing may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Ingestion:

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

May cause target organ effects after ingestion.

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	C.A.S. No.	Class Description	Regulation
Toluene Diisocyanate	26471-62-5	Anticipated human carcinogen	National Toxicology Program Carcinogens
Toluene Diisocyanate	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

Acute Toxicity

Name	Route	Species	Value
Overall product	Inhalation-Vapor(4 hr)		Data not available or insufficient for classification; calculated ATE > 50 mg/l
Overall product	Ingestion		Data not available or insufficient for classification; calculated ATE > 5,000 mg/kg
Urethane Prepolymer			Data not available or insufficient for classification
Talc	Ingestion		LD50 Not available
Titanium Dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium Dioxide	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium Dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Fumed Silica	Dermal	Rabbit	LD50 > 5,000 mg/kg
Fumed Silica	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.691 mg/l
Fumed Silica	Ingestion	Rat	LD50 > 5,110 mg/kg
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
Iron Magnesium Oxide			Data not available or insufficient for classification
Alkyl Isocyanate Silane			Data not available or insufficient for classification
Toluene Diisocyanate	Inhalation-Vapor (4 hours)	Mouse	LC50 0.12 mg/l
Toluene Diisocyanate	Dermal	Rabbit	LD50 > 9,400 mg/kg
Toluene Diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.35 mg/l
Toluene Diisocyanate	Ingestion	Rat	LD50 > 5,000 mg/kg
Heptane	Dermal	Rabbit	LD50 3,000 mg/kg
Heptane	Inhalation-Vapor (4 hours)	Rat	LC50 103 mg/l
Heptane	Ingestion	Rat	LD50 > 15,000 mg/kg
(Gamma-mercaptopropyl)trimethoxysilane	Dermal	Rabbit	LD50 2,270 mg/kg
(Gamma-mercaptopropyl)trimethoxysilane	Ingestion	Rat	LD50 770 mg/kg
Dibutyltin Dilaurate	Ingestion		LD50 estimated to be 300 - 2,000 mg/kg
Dibutyltin Dilaurate	Dermal	Rabbit	LD50 > 2,000 mg/kg
HMDI	Dermal	Rabbit	LD50 570 mg/kg
HMDI	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.12 mg/l
HMDI	Ingestion	Rat	LD50 710 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Urethane Prepolymer		Data not available or insufficient for classification
Talc	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Fumed Silica	Rabbit	No significant irritation
Zinc Oxide	Human and animal	No significant irritation
Carbitol Acetate	Human and animal	Minimal irritation
Iron Magnesium Oxide		Data not available or insufficient for classification
Alkyl Isocyanate Silane		Data not available or insufficient for classification
Toluene Diisocyanate	Rabbit	Irritant
Heptane	Human	Mild irritant
(Gamma-mercaptopropyl)trimethoxysilane		Data not available or insufficient for classification
Dibutyltin Dilaurate		Data not available or insufficient for classification
HMDI	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
Urethane Prepolymer		Data not available or insufficient for classification
Talc	Rabbit	No significant irritation
Titanium Dioxide	Rabbit	No significant irritation
Fumed Silica	Rabbit	No significant irritation
Zinc Oxide	Rabbit	Mild irritant
Carbitol Acetate	Rabbit	Mild irritant
Iron Magnesium Oxide		Data not available or insufficient for classification
Alkyl Isocyanate Silane		Data not available or insufficient for classification
Toluene Diisocyanate	Rabbit	Corrosive
Heptane		Moderate irritant
(Gamma-mercaptopropyl)trimethoxysilane		Data not available or insufficient for classification
Dibutyltin Dilaurate		Data not available or insufficient for classification
HMDI	Rabbit	Corrosive

Skin Sensitization

Name	Species	Value
Urethane Prepolymer		Data not available or insufficient for classification
Talc		Data not available or insufficient for classification
Titanium Dioxide	Human and animal	Not sensitizing
Fumed Silica	Human and animal	Not sensitizing
Zinc Oxide	Guinea pig	Some positive data exist, but the data are not sufficient for classification
Carbitol Acetate	Human and animal	Not sensitizing
Iron Magnesium Oxide		Data not available or insufficient for classification
Alkyl Isocyanate Silane		Data not available or insufficient for classification
Toluene Diisocyanate	Human and animal	Sensitizing
Heptane		Data not available or insufficient for classification
(Gamma-mercaptopropyl)trimethoxysilane		Data not available or insufficient for classification
Dibutyltin Dilaurate		Data not available or insufficient for classification
HMDI	Multiple animal species	Sensitizing

Respiratory Sensitization

Name	Species	Value
Urethane Prepolymer		Data not available or insufficient for classification
Talc	Human	Not sensitizing
Titanium Dioxide		Data not available or insufficient for classification
Fumed Silica		Data not available or insufficient for classification
Zinc Oxide		Data not available or insufficient for classification
Carbitol Acetate		Data not available or insufficient for classification
Iron Magnesium Oxide		Data not available or insufficient for classification
Alkyl Isocyanate Silane		Data not available or insufficient for classification
Toluene Diisocyanate	Human	Sensitizing
Heptane		Data not available or insufficient for classification
(Gamma-mercaptopropyl)trimethoxysilane		Data not available or insufficient for classification
Dibutyltin Dilaurate		Data not available or insufficient for classification
HMDI	Human and animal	Sensitizing

Germ Cell Mutagenicity

Name	Route	Value
Urethane Prepolymer		Data not available or insufficient for classification
Talc	In Vitro	Not mutagenic
Talc	In vivo	Not mutagenic
Titanium Dioxide	In Vitro	Not mutagenic
Titanium Dioxide	In vivo	Not mutagenic
Fumed 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	Not mutagenic
Iron Magnesium Oxide		Data not available or insufficient for classification
Alkyl Isocyanate Silane		Data not available or insufficient for classification
Toluene Diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Heptane	In Vitro	Not mutagenic
(Gamma-mercaptopropyl)trimethoxysilane		Data not available or insufficient for classification
Dibutyltin Dilaurate		Data not available or insufficient for classification
HMDI	In Vitro	Not mutagenic
HMDI	In vivo	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
Urethane Prepolymer			Data not available or insufficient for classification
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
Fumed Silica	Not Specified	Mouse	Some positive data exist, but the data are not sufficient for classification
Zinc Oxide			Data not available or insufficient for classification
Carbitol Acetate			Data not available or insufficient for classification
Iron Magnesium Oxide			Data not available or insufficient for classification
Alkyl Isocyanate Silane			Data not available or insufficient for classification
Toluene Diisocyanate	Inhalation	Human and animal	Not carcinogenic
Toluene Diisocyanate	Ingestion	Multiple animal species	Carcinogenic
Heptane			Data not available or insufficient for classification
(Gamma-mercaptopropyl)trimethoxysilane			Data not available or insufficient for classification
Dibutyltin Dilaurate			Data not available or insufficient for classification
HMDI	Inhalation	Rat	Not carcinogenic

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test Result	Exposure Duration
Urethane Prepolymer		Data not available or insufficient for classification			
Talc	Ingestion	Not toxic to development	Rat	NOAEL 1,600 mg/kg	during organogenesis
Titanium Dioxide		Data not available or insufficient for classification			
Fumed Silica	Ingestion	Not toxic to female reproduction	Rat	NOAEL 509 mg/kg/day	1 generation
Fumed Silica	Ingestion	Not toxic to male reproduction	Rat	NOAEL 497 mg/kg/day	1 generation
Fumed Silica	Ingestion	Not toxic to development	Rat	NOAEL 1,350 mg/kg/day	during organogenesis
Zinc Oxide	Ingestion	Some positive reproductive/developmental data exist, but the data are not sufficient for classification	Multiple animal species	NOAEL 125 mg/kg/day	prematuring & during gestation
Carbitol Acetate		Data not available or insufficient for classification			
Iron Magnesium Oxide		Data not available or insufficient for classification			
Alkyl Isocyanate Silane		Data not available or insufficient for classification			
Toluene Diisocyanate	Inhalation	Not toxic to female reproduction	Rat	NOAEL .002 mg/l	2 generation
Toluene Diisocyanate	Inhalation	Not toxic to male reproduction	Rat	NOAEL .002 mg/l	2 generation
Toluene Diisocyanate	Inhalation	Some positive developmental data exist, but the data are not sufficient for classification	Rat	NOAEL .004 mg/l	during organogenesis
Heptane		Data not available or insufficient for classification			
(Gamma-mercaptopropyl)trimethoxysilane		Data not available or insufficient for			

		classification			
Dibutyltin Dilaurate		Data not available or insufficient for classification			
HMDI	Inhalation	Not toxic to female reproduction	Rat	NOAEL 0.002 mg/l	7 weeks
HMDI	Inhalation	Not toxic to development	Rat	NOAEL 0.002 mg/l	7 weeks
HMDI	Inhalation	Some positive male reproductive data exist, but the data are not sufficient for classification	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
Urethane Prepolymer			Data not available or insufficient for classification			
Talc			Data not available or insufficient for classification			
Fumed Silica			Data not available or insufficient for classification			
Zinc Oxide			Data not available or insufficient for classification			
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
Iron Magnesium Oxide			Data not available or insufficient for classification			
Alkyl Isocyanate Silane			Data not available or insufficient for classification			
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	
(Gamma-mercaptopropyl)trimethoxy silane			Data not available or insufficient for classification			
Dibutyltin Dilaurate			Data not available or insufficient for classification			
HMDI	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
HMDI	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test Result	Exposure Duration
Urethane Prepolymer			Data not available or insufficient for classification			
Talc	Inhalation	pneumoconiosis	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL Not available	occupational exposure
Talc	Inhalation	pulmonary fibrosis respiratory system	Some positive data exist, but the data are not sufficient for classification	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 0.010 mg/l	2 years
Titanium Dioxide	Inhalation	pulmonary fibrosis	All data are negative	Human	NOAEL Not available	occupational exposure
Fumed Silica	Inhalation	respiratory system silicosis	All data are negative	Human	NOAEL Not available	occupational exposure
Zinc Oxide	Ingestion	nervous system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 600 mg/kg/day	10 days
Zinc Oxide	Ingestion	endocrine system hematopoietic system kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Other	NOAEL 500 mg/kg/day	6 months
Carbitol Acetate	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.48 mg/l	2 weeks
Carbitol Acetate	Inhalation	liver immune system kidney and/or bladder	All data are negative	Rat	NOAEL 0.48 mg/l	2 weeks
Iron Magnesium Oxide			Data not available or insufficient for classification			
Alkyl Isocyanate Silane			Data not available or insufficient for classification			
Toluene Diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL .000006 mg/l	occupational exposure
Heptane	Inhalation	liver nervous system kidney and/or bladder	All data are negative	Rat	NOAEL 12 mg/l	26 weeks
(Gamma-mercaptopropyl)trimethoxysilane			Data not available or insufficient for classification			
Dibutyltin Dilaurate			Data not available or insufficient for classification			
HMDI	Inhalation	liver kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.002 mg/l	3 weeks
HMDI	Inhalation	endocrine system	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.0014 mg/l	4 weeks
HMDI	Inhalation	blood	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 0.0012 mg/l	2 years
HMDI	Inhalation	nervous system	All data are negative	Rat	NOAEL 0.002 mg/l	7 weeks
HMDI	Inhalation	heart	All data are negative	Rat	NOAEL 0.001 mg/l	90 days

Aspiration Hazard

Name	Value
Urethane Prepolymer	Not an aspiration hazard
Talc	Not an aspiration hazard
Titanium Dioxide	Not an aspiration hazard
Fumed Silica	Not an aspiration hazard
Zinc Oxide	Not an aspiration hazard
Carbitol Acetate	Not an aspiration hazard
Iron Magnesium Oxide	Not an aspiration hazard
Alkyl Isocyanate Silane	Not an aspiration hazard
Toluene Diisocyanate	Not an aspiration hazard
Heptane	Aspiration hazard
(Gamma-mercaptopropyl)trimethoxysilane	Not an aspiration hazard
Dibutyltin Dilaurate	Not an aspiration hazard
HMDI	Not an 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

Not determined.

Chemical fate information

Not determined.

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. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste. 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): Not regulated

SECTION 14: Transport Information

Not regulated per U.S. DOT, IATA or IMO.

*These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and **not the packaging, labeling, or marking requirements**. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.*

SECTION 15: Regulatory information

15.1. US Federal Regulations

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - Yes Delayed Hazard - Yes

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	1 - 5
Carbitol Acetate (GLYCOL ETHERS)	112-15-2	1 - 5

Toluene Diisocyanate 26471-62-5 < 0.5

15.2. State Regulations

Contact 3M for more information.

California Proposition 65

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>Classification</u>
TOLUENE	108-88-3	Female reproductive toxin
TOLUENE	108-88-3	Developmental Toxin
Toluene Diisocyanate	26471-62-5	Carcinogen

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

WARNING: This product contains a chemical known to the State of California to cause cancer.

15.3. Chemical Inventories

The components of this product are in compliance with the chemical notification requirements of TSCA.

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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