



Material Safety Data Sheet

Copyright, 2012, 3M Company All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Marine Adhesive Sealant 5200 Mahogany PN 06502
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
 Marine & Specialty Vehicle
ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

Issue Date: 08/22/12
Supersedes Date: 06/14/12

Document Group: 19-4648-2

Product Use:

Specific Use: Marine Adhesive Sealant
Intended Use: Sealant

SECTION 2: INGREDIENTS

| Ingredient | C.A.S. No. | % by Wt |
|--|-------------------|----------------|
| Urethane Prepolymer | 68611-34-7 | 40 - 70 |
| Talc | 14807-96-6 | 10 - 30 |
| Titanium Dioxide | 13463-67-7 | 1 - 5 |
| Iron Oxides | Mixture | 1 - 5 |
| Zinc Oxide | 1314-13-2 | 1 - 5 |
| Carbitol Acetate | 112-15-2 | 1 - 5 |
| Fumed Silica | 112945-52-5 | 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 |

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: Red/brown

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause allergic respiratory reaction. May cause target organ effects. Contains a chemical or chemicals which can cause cancer.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:

Mild Eye Irritation: Signs/symptoms may include redness, pain, and tearing.

Skin Contact:

Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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 be absorbed following inhalation and cause target organ effects.

Ingestion:

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

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

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

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>Class Description</u> | <u>Regulation</u> |
|----------------------|-------------------|-------------------------------|---|
| Toluene Diisocyanate | 26471-62-5 | Grp. 2B: Possible human carc. | International Agency for Research on Cancer |
| Toluene Diisocyanate | 26471-62-5 | Anticipated human carcinogen | National Toxicology Program Carcinogens |

SECTION 4: FIRST AID MEASURES

4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical attention. Wash contaminated clothing and clean shoes before reuse.

Inhalation: Remove person to fresh air. If signs/symptoms develop, get medical attention.

If Swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 FLAMMABLE PROPERTIES

| | |
|--------------------------|--------------------------|
| Autoignition temperature | <i>No Data Available</i> |
| Flash Point | No flash point |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |

5.2 EXTINGUISHING MEDIA

Non-combustible. Choose material suitable for surrounding fire.

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. 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. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. Avoid contact with water.

6.2. Environmental precautions

Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Dispose of collected material as soon as possible.

Clean-up methods

Refer to other sections of this MSDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment. Call 3M-HELPS line (1-800-364-3577) for more information on handling and managing the spill. Collect as much of the spilled material as possible. Clean up residue.

In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.

SECTION 7: HANDLING AND STORAGE

7.1 HANDLING

Avoid eye contact. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid skin contact. Avoid breathing of vapors. For industrial or professional use only. Do not ingest. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not use heat to aid in the removal of product. The application of heat may generate levels

of TOLUENE DIISOCYANATE (TDI) in excess of the TLV.

7.2 STORAGE

Store away from heat. Store out of direct sunlight. Keep container tightly closed. Store away from areas where product may come into contact with food or pharmaceuticals. Store in a cool, dry place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Do not use in a confined area or areas with little or no air movement. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact.

The following eye protection(s) are recommended: Indirect Vented Goggles

.

8.2.2 Skin Protection

Avoid skin contact.

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.

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

.

8.2.3 Respiratory Protection

Avoid breathing of vapors. Avoid breathing of dust created by cutting, sanding, grinding or machining.

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.

8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

| <u>Ingredient</u> | <u>Authority</u> | <u>Type</u> | <u>Limit</u> | <u>Additional Information</u> |
|-------------------|-------------------------|-------------|--------------|-------------------------------|
| FREE ISOCYANATES | Manufacturer determined | TWA | 0.005 ppm | |
| FREE ISOCYANATES | Manufacturer determined | STEL | 0.02 ppm | |
| Heptane | ACGIH | TWA | 400 ppm | |
| Heptane | ACGIH | STEL | 500 ppm | |
| Heptane | OSHA | TWA | 2000 mg/m3 | |
| Heptane | ACGIH | TWA | 400 ppm | |
| Heptane | ACGIH | STEL | 500 ppm | |
| Heptane | OSHA | TWA | 2000 mg/m3 | |

| | | | | |
|----------------------|-------|----------------------------------|----------------------------------|------------|
| SILICA, AMORPHOUS | OSHA | TWA concentration | 0.8 mg/m3 | |
| SILICA, AMORPHOUS | OSHA | TWA | 20 millions of particles/cu. ft. | |
| Talc | ACGIH | TWA, respirable fraction | 2 mg/m3 | |
| Talc | CMRG | TWA, as respirable dust | 0.5 mg/m3 | |
| Talc | OSHA | TWA concentration, respirable | 0.1 mg/m3 | |
| Talc | OSHA | TWA concentration, as total dust | 0.3 mg/m3 | |
| Talc | OSHA | TWA | 20 millions of particles/cu. ft. | |
| Titanium Dioxide | ACGIH | TWA | 10 mg/m3 | |
| Titanium Dioxide | CMRG | TWA, as respirable dust | 5 mg/m3 | |
| Titanium Dioxide | OSHA | TWA, as total dust | 15 mg/m3 | |
| Toluene Diisocyanate | ACGIH | TWA | 0.005 ppm | Sensitizer |
| Toluene Diisocyanate | ACGIH | STEL | 0.02 ppm | Sensitizer |
| Zinc Oxide | ACGIH | TWA, respirable fraction | 2 mg/m3 | |
| Zinc Oxide | ACGIH | STEL, respirable fraction | 10 mg/m3 | |
| Zinc Oxide | OSHA | TWA, as fume | 5 mg/m3 | |
| Zinc Oxide | OSHA | TWA, respirable fraction | 5 mg/m3 | |
| Zinc Oxide | OSHA | TWA, as total dust | 15 mg/m3 | |

SOURCE OF EXPOSURE LIMIT DATA:

- ACGIH: American Conference of Governmental Industrial Hygienists
- CMRG: Chemical Manufacturer Recommended Guideline
- OSHA: Occupational Safety and Health Administration
- AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|--|
| Specific Physical Form: | Paste |
| Odor, Color, Grade: | Red/brown |
| General Physical Form: | Liquid |
| Autoignition temperature | <i>No Data Available</i> |
| Flash Point | No flash point |
| Flammable Limits(LEL) | <i>Not Applicable</i> |
| Flammable Limits(UEL) | <i>Not Applicable</i> |
| Boiling Point | <i>Not Applicable</i> |
| Density | 11.03 lb/gal |
| Vapor Density | <i>No Data Available</i> |
| Vapor Pressure | <i>No Data Available</i> |
| Specific Gravity | 1.3 [Ref Std: WATER=1] |
| pH | <i>No Data Available</i> |
| Melting point | <i>No Data Available</i> |
| Solubility in Water | Nil |
| Evaporation rate | <i>No Data Available</i> |
| Hazardous Air Pollutants | <=0.2 % weight [Test Method: Calculated] |

| | |
|---|--|
| Volatile Organic Compounds | 40 g/l [<i>Test Method:</i> tested per EPA method 24] [<i>Details:</i> EU VOC content] |
| Kow - Oct/Water partition coef | <i>No Data Available</i> |
| Percent volatile | 2.9 % weight |
| VOC Less H2O & Exempt Solvents | 40 g/l [<i>Test Method:</i> tested per EPA method 24] |
| Viscosity | 100,000 - 500,000 centipoise |

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:

10.1 Conditions to avoid

Heat

10.2 Materials to avoid

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

Amines

Alcohols

Water

Hazardous Polymerization: Hazardous polymerization will not occur.

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 |

SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for 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

Waste Disposal Method: Dispose of completely cured (or polymerized) wastes in a sanitary landfill. Incinerate uncured product in a permitted hazardous waste incinerator in the presence of a combustible material. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

ID Number(s):

60-4400-9507-7, 60-9801-0934-6, 62-5237-5236-8

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

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 |
| Toluene Diisocyanate (Benzene, 1,3-diisocyanatomethyl-) | 26471-62-5 | < 0.5 |

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

| <u>Ingredient</u> | <u>C.A.S. No.</u> | <u>Classification</u> |
|----------------------|-------------------|-----------------------|
| Toluene Diisocyanate | 26471-62-5 | **Carcinogen |

** WARNING: contains a chemical which can cause cancer.

CHEMICAL INVENTORIES

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

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS. Contact 3M for more information.

INTERNATIONAL REGULATIONS

Contact 3M for more information.

US LABEL INFORMATION

PRECAUTIONS: Keep away from sources of ignition - No Smoking. Avoid breathing vapors, eye contact and prolonged skin contact. Use only in well ventilated areas. When using do not eat, drink or smoke. Wash thoroughly after handling. Launder contaminated clothing before re-use. Do not take internally. Keep container tightly closed and in a well ventilated place.

This MSDS 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 Reactivity: 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.

Revision Changes:

Section 8: Respiratory protection - recommended respirators was modified.

Section 8: Respiratory protection - recommended respirators guide was modified.

Section 14: ID Number(s) Template 1 was modified.

Section 2: Ingredient table was modified.

Section 8: Respiratory protection - recommended respirators punctuation was deleted.

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from 3M

3M USA MSDSs are available at www.3M.com