Material Safety Data Sheet

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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: 08/21/09
Supercedes Date: 06/28/07
Document Group: 19-4648-2

Product Use:
Specific Use: Marine Adhesive Sealant
Intended Use: Sealant

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urethane Prepolymer</td>
<td>68611-34-7</td>
<td>40 - 70</td>
</tr>
<tr>
<td>Tale</td>
<td>14807-96-6</td>
<td>15 - 40</td>
</tr>
<tr>
<td>Fumed Silica</td>
<td>112945-52-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Titanium Dioxide</td>
<td>13463-67-7</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Diethylene Glycol Monoethyl Ether Acetate</td>
<td>112-15-2</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>1314-13-2</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Iron Oxides</td>
<td>Mixture</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Alkyl Isocyanate Silane</td>
<td>85702-90-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Toluene Diisocyanate</td>
<td>26471-62-5</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Heptane</td>
<td>142-82-5</td>
<td>&lt; 0.25</td>
</tr>
<tr>
<td>Xylene</td>
<td>1330-20-7</td>
<td>&lt; 0.15</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>&lt; 0.03</td>
</tr>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>&lt; 0.015</td>
</tr>
<tr>
<td>Hexamethylene Diisocyanate</td>
<td>822-06-0</td>
<td>&lt; 0.015</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION
3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: Red/brown
General Physical Form: Solid
Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause allergic respiratory reaction. 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.

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

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

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

Inhalation:
Vapors released during curing may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:
    Allergic Respiratory Reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest.

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

Target Organ Effects:
Persons previously sensitized to isocyanates may develop a cross-sensitization reaction to other isocyanates.

Carcinogenicity:
Contains a chemical or chemicals which can cause cancer.
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
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<tr>
<td>Autoignition temperature</td>
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</tr>
<tr>
<td>Flash Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits - LEL</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits - UEL</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

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

Accidental Release Measures: 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. Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. Ventilate the area with fresh air. 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. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Collect as much of the spilled material as possible. 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 MSDS. Dispose of collected material as soon as possible.

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. Avoid skin contact. Avoid breathing of vapors. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Do not ingest. Avoid breathing of dust created by cutting, sanding, grinding or machining. Keep out of the reach of children. 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 in a cool, dry place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use with appropriate local exhaust ventilation. 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, Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection
Avoid breathing of vapors. Avoid breathing of dust created by cutting, sanding, grinding or machining.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or fullface air-purifying respirator with formaldehyde cartridges and N95 particulate prefilters. Consult the current 3M Respiratory Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
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Page 4 of 10
<table>
<thead>
<tr>
<th>Substance</th>
<th>Source</th>
<th>TWA</th>
<th>STEL</th>
<th>Notes</th>
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<td>Ethylbenzene</td>
<td>ACGIH</td>
<td>100 ppm</td>
<td></td>
<td>Table A3</td>
</tr>
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<td>Ethylbenzene</td>
<td>ACGIH</td>
<td>125 ppm</td>
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<td>Table A3</td>
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<td>Ethylbenzene</td>
<td>CMRG</td>
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<td>Ethylbenzene</td>
<td>CMRG</td>
<td>75 ppm</td>
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</tr>
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<td>Ethylbenzene</td>
<td>OSHA</td>
<td>100 ppm</td>
<td></td>
<td>Table Z-1A</td>
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<tr>
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<td>FREE ISOCYANATES</td>
<td>3M</td>
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<td>Hexamethylene Diisocyanate</td>
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<tr>
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<td>CMRG</td>
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<td>Titanium Dioxide</td>
<td>ACGIH</td>
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<td>ACGIH</td>
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<td>Toluene</td>
<td>CMRG</td>
<td>75 ppm</td>
<td></td>
<td>Skin Notation*</td>
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<tr>
<td>Toluene</td>
<td>OSHA</td>
<td>100 ppm</td>
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<tr>
<td>Toluene</td>
<td>OSHA, Vacated</td>
<td>150 ppm</td>
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<td></td>
</tr>
<tr>
<td>Xylene</td>
<td>ACGIH</td>
<td>100 ppm</td>
<td></td>
<td>Table A4</td>
</tr>
<tr>
<td>Xylene</td>
<td>CMRG</td>
<td>150 ppm</td>
<td></td>
<td>Table A4</td>
</tr>
<tr>
<td>Xylene</td>
<td>CMRG</td>
<td>50 ppm</td>
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<tr>
<td>Xylene</td>
<td>OSHA</td>
<td>100 ppm</td>
<td></td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>ACGIH</td>
<td>2 mg/m³</td>
<td></td>
<td>Table Z-1A</td>
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<tr>
<td>Zinc Oxide</td>
<td>ACGIH</td>
<td>10 mg/m³</td>
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<td></td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>OSHA</td>
<td>5 mg/m³</td>
<td></td>
<td>Table Z-1</td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>OSHA, Vacated</td>
<td>10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>OSHA, as fume</td>
<td>10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>OSHA, Vacated,</td>
<td>10 mg/m³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zinc Oxide</td>
<td>OSHA, as total dust</td>
<td>15 mg/m³</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

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: Solid
Autoignition temperature No Data Available
Flash Point Not Applicable
Flammable Limits - LEL Not Applicable
Flammable Limits - UEL Not Applicable
Boiling point Not Applicable
Density 11.03 lb/gal
Vapor Density No Data Available
Vapor Pressure No Data Available
Specific Gravity 1.3 [Ref Std: WATER=1]
pH No Data Available
Melting point No Data Available
Solubility in Water Nil
Volatile Organic Compounds 40 g/l [Test Method: tested per EPA method 24]
Percent volatile 2.94 % weight
VOC Less H2O & Exempt Solvents 40 [Test Method: tested per EPA method 24]
Viscosity 100,000 - 500,000 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions 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; Heat

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isocyanates</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Hydrogen Cyanide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Irritant Vapors or Gases</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Oxides of Nitrogen</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

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: Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste.

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

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’s transportation classifications are based on product formulation, packaging, 3M policies and 3M’s 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):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No</th>
<th>% by Wt</th>
</tr>
</thead>
</table>


Diethylene Glycol Monoethyl Ether Acetate 112-15-2 1 - 5
(GLYCOL ETHERS)
Zinc Oxide (ZINC COMPOUNDS) 1314-13-2 1 - 5
Toluene Diisocyanate 26471-62-5 < 1

This material contains a chemical which requires export notification under TSCA Section 12(b):

<table>
<thead>
<tr>
<th>Ingredient (Category if applicable)</th>
<th>C.A.S. No</th>
<th>Regulation</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heptane</td>
<td>142-82-5</td>
<td>Rule Chemicals</td>
<td>Applicable</td>
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</tbody>
</table>

STATE REGULATIONS
Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylbenzene</td>
<td>100-41-4</td>
<td>**Carcinogen</td>
</tr>
<tr>
<td>Toluene</td>
<td>108-88-3</td>
<td>*Developmental Toxin</td>
</tr>
<tr>
<td>Toluene Diisocyanate</td>
<td>26471-62-5</td>
<td>**Carcinogen</td>
</tr>
</tbody>
</table>

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.
** 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.

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:
Copyright was modified.
Section 5: Extinguishing media information was modified.
Section 7: Handling information was modified.
Section 7: Storage information was modified.
Section 8: Engineering controls information was modified.
Section 8: Eye/face protection phrase was modified.
Section 8: Skin protection phrase was modified.
Section 8: Respiratory protection information was modified.
Section 10: Materials and conditions to avoid physical property was modified.
Section 14: Transportation legal text was modified.
Section 15: 311/312 Reactivity Hazard score was modified.
Sections 3 and 9: Odor, color, grade information was modified.
Section 8: Eye/face protection information was added.
Section 8: Skin protection - recommended gloves information was added.
Section 8: Respiratory protection - recommended respirators information was added.
Section 8: Eye/face protection text was added.
Section 8: Skin protection - recommended gloves text was added.
Section 8: Respiratory protection - recommended respirators was added.
Section 15: California proposition 65 reproductive harm warning was added.
Section 8: Respiratory protection - recommended respirators guide was added.
Section 8: Skin protection - protective clothing text was added.
Section 8: Respiratory protection - recommended respirators punctuation was added.
Section 8: Eye/face protection information - punctuation - was added.
Section 8: Skin protection - recommended gloves - punctuation was added.
Section 14: ID Number Heading Template 1 was added.
Section 14: ID Number(s) Template 1 was added.
Section 2: Ingredient table was added.
Section 15: TSCA section 12[b] text was added.
Section 15: EPCRA 313 information was added.
Section 15: EPCRA 313 text was added.
Section 8: Exposure guidelines ingredient information was added.
Section 8: Exposure guidelines legend was added.
Section 8: Exposure guideline note was added.
Section 15: TSCA section 12[b] information was added.
Section 8: Exposure guidelines data source legend was added.
Section 3: Carcinogenicity table was added.
Section 3: Carcinogenicity heading was added.
Section 15: California proposition 65 ingredient information was added.
Section 15: California proposition 65 heading was added.
Section 15: California proposition 65 cancer warning was added.
Section 8: Respiratory protection comment was deleted.
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