Material Safety Data Sheet

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Marine Adhesive Sealant 5200, 5210 Tan; PN 06501, 6501E
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: 19-4642-5

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	15 - 40
Titanium Dioxide	13463-67-7	4 - 7
Fumed Silica	112945-52-5	1 - 5
Diethylene Glycol Monoethyl Ether Acetate	112-15-2	1 - 5
Zinc Oxide	1314-13-2	1 - 5
Iron Magnesium Oxide	12068-86-9	1 - 5
Alkyl Isocyanate Silane	85702-90-5	1 - 5
Toluene Diisocyanate	26471-62-5	< 1
Dibutytin Dilaurate	77-58-7	< 0.15
Xylene	1330-20-7	< 0.15
Toluene	108-88-3	< 0.03
Ethylbenzene	100-41-4	< 0.02
Hexamethylene Diisocyanate	822-06-0	< 0.02

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: Tan
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.

Ingredient	C.A.S. No.	Class Description	Regulation
Ethylbenzene	100-41-4	Group 2B	International Agency for Research on Cancer
Toluene Diisocyanate	26471-62-5	Group 2B	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	*No Data Available*
Flash Point	*Not Applicable*
Flammable Limits - LEL	*Not Applicable*
Flammable Limits - UEL	*Not Applicable*

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: Safety Glasses with side shields.

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

Ingredient	Authority	Type	Limit	Additional Information

Ethylbenzene	ACGIH	TWA	100 ppm	Table A3
Ethylbenzene	ACGIH	STEL	125 ppm	Table A3
Ethylbenzene	CMRG	TWA	25 ppm	
Ethylbenzene	CMRG	STEL	75 ppm	
Ethylbenzene	OSHA	TWA	100 ppm	Table Z-1A
Ethylbenzene	OSHA	STEL	125 ppm	Table Z-1A
FREE ISOCYANATES	3M	TWA	0.005 ppm	
FREE ISOCYANATES	3M	STEL	0.02 ppm	
Hexamethylene Diisocyanate	ACGIH	TWA	0.005 ppm	
Hexamethylene Diisocyanate	CMRG	CEIL	0.02 ppm	
Talc	ACGIH	TWA, respirable	2 mg/m3	Table A4
Talc	CMRG	TWA, as respirable dust	0.5 mg/m3	
Talc	OSHA	TWA, respirable	2 mg/m3	Table Z-1A
TIN, ORGANIC COMPOUNDS	ACGIH	TWA, as Sn	0.1 mg/m3	Skin Notation*****; Table A4
TIN, ORGANIC COMPOUNDS	ACGIH	STEL, as Sn	0.2 mg/m3	Skin Notation*****
TIN, ORGANIC COMPOUNDS	OSHA	TWA, as Sn	0.1 mg/m3	Skin Notation*****; Table Z-1A
Titanium Dioxide	ACGIH	TWA	10 mg/m3	Table A4
Titanium Dioxide	CMRG	TWA, as respirable dust	5 mg/m3	
Titanium Dioxide	OSHA	TWA, Vacated, as dust	10 mg/m3	
Titanium Dioxide	OSHA	TWA, as total dust	15 mg/m3	Table Z-1
Toluene	ACGIH	TWA	20 ppm	Table A4
Toluene	CMRG	STEL	75 ppm	Skin Notation*****
Toluene	OSHA	TWA, Vacated	100 ppm	
Toluene	OSHA	STEL, Vacated	150 ppm	
Toluene	OSHA	TWA	200 ppm	Table Z-2
Toluene	OSHA	CEIL	300 ppm	Table Z-2
Xylene	ACGIH	TWA	100 ppm	Table A4
Xylene	ACGIH	STEL	150 ppm	Table A4
Xylene	CMRG	TWA	50 ppm	
Xylene	CMRG	STEL	75 ppm	
Xylene	OSHA	TWA	100 ppm	Table Z-1A
Xylene	OSHA	STEL	150 ppm	Table Z-1A
Zinc Oxide	ACGIH	TWA, respirable	2 mg/m3	
Zinc Oxide	ACGIH	STEL	10 mg/m3	
Zinc Oxide	OSHA	TWA, as fume	5 mg/m3	Table Z-1
Zinc Oxide	OSHA	TWA, respirable	5 mg/m3	Table Z-1
Zinc Oxide	OSHA	STEL, Vacated, as fume	10 mg/m3	
Zinc Oxide	OSHA	TWA, Vacated, as dust	10 mg/m3	
Zinc Oxide	OSHA	TWA, as total dust	15 mg/m3	Table Z-1

* 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:	Tan
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	1.3 g/cm3
Vapor Density	*No Data Available*
Vapor Pressure	*No Data Available*
Specific Gravity	1.3 [*Ref Std:* WATER=1]
pH	*Not Applicable*
Melting point	*No Data Available*
Solubility in Water	Nil
Volatile Organic Compounds	40 [*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

Substance	Condition
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: 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):
60-4400-9505-1, 60-9801-0690-4, 60-9801-0933-8, KS-9990-0624-4

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):

Ingredient	C.A.S. No	% by Wt
Zinc Oxide (ZINC COMPOUNDS)	1314-13-2	1 - 5

Diethylene Glycol Monoethyl Ether Acetate (GLYCOL ETHERS)	112-15-2	1 - 5
Toluene Diisocyanate	26471-62-5	< 1

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. No.	Classification
Ethylbenzene	100-41-4	**Carcinogen
Toluene	108-88-3	*Developmental Toxin
Toluene Diisocyanate	26471-62-5	**Carcinogen

* 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 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: Respiratory protection information was modified.
Section 8: Skin protection - recommended gloves information was modified.
Section 8: Respiratory protection - recommended respirators 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.
Section 9: Density information was modified.
Sections 3 and 9: Odor, color, grade information was modified.
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: 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 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.
Section 16: Reason for reissue comment was deleted.
Section 16: Reason for reissue heading was deleted.