Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Marine Adhesive Sealant Fast Cure 4200 - Black; PN 06564
MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division

ADDRESS: 3M Center, St. Paul, MN 55144-1000

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

Issue Date: 10/03/12
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Product Use:
Specific Use: Adhesive Sealant
Intended Use: Sealant

SECTION 2: INGREDIENTS

Ingredient	C.A.S. No.	% by Wt
Poly(Vinyl Chloride)	9002-86-2	15 - 40
Urethane Polymer	51447-37-1	10 - 35
Phenol Alkyl Sulfonate	70775-94-9	10 - 30
Xylene	1330-20-7	< 5.5
Calcium Oxide	1305-78-8	1 - 5
Ethylbenzene	100-41-4	< 1.6
Petroleum Distillates	64742-47-8	0.5 - 1.5
3-(Trimethoxysilyl)propyl glycidyl ether	2530-83-8	0.1 - 1
Carbon Black	1333-86-4	0.1 - 1
p,p'-Methylenebis(phenyl isocyanate)	101-68-8	< 0.16

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: Black thixotropic paste, slight solvent odor.

General Physical Form: Solid
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 birth defects or other reproductive harm. Contains a chemical or chemicals which can cause cancer.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

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

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:
Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

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

Prolonged or repeated exposure may cause:
Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

Kidney/Bladder Effects: Signs/symptoms may include changes in urine production, abdominal or lower back pain, increased protein in urine, increased blood urea nitrogen (BUN), blood in urine, and painful urination.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

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

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
Ethylbenzene	100-41-4	Grp. 2B: Possible human carc.	International Agency for Research on 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

Autoignition temperature	>=750 ºF
Flash Point	No flash point
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: Not applicable. 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.

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. Dispose of collected material as soon as possible.

Clean-up methods
Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Contain 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. Keep out of the reach of children. Do not ingest. Do not use heat to aid in the removal of product. The application of heat may generate levels of P,P'-METHYLENEBIS(PHENYL ISOCYANTE) in excess of the TLV.

7.2 STORAGE

Keep container tightly closed. Store away from areas where product may come into contact with food or pharmaceuticals.

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.

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
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.
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 formaldehyde and particulates

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

Ingredient	Authority	Type	Limit	Additional Information

3-(Trimethoxysilyl)propyl glycidyl ether	CMRG	TWA	5 ppm	
Calcium Oxide	ACGIH	TWA	2 mg/m3	
Calcium Oxide	OSHA	TWA	5 mg/m3	
Carbon Black	ACGIH	TWA, inhalable fraction	3 mg/m3	
Carbon Black	CMRG	TWA	0.5 mg/m3	
Carbon Black	OSHA	TWA	3.5 mg/m3	
Ethylbenzene	ACGIH	TWA	20 ppm	
Ethylbenzene	CMRG	TWA	25 ppm	
Ethylbenzene	CMRG	STEL	75 ppm	
Ethylbenzene	OSHA	TWA	435 mg/m3	
FREE ISOCYANATES	Manufacturer determined	TWA	0.005 ppm	
FREE ISOCYANATES	Manufacturer determined	STEL	0.02 ppm	
Petroleum Distillates	CMRG	TWA	300 ppm	
Kerosine (petroleum)	ACGIH	TWA, as total hydrocarbon vapor, non-aerosol	200 mg/m3	Skin Notation*
p,p'-Methylenebis(phenyl isocyanate)	ACGIH	TWA	0.005 ppm	
p,p'-Methylenebis(phenyl isocyanate)	OSHA	CEIL	0.2 mg/m3	
Poly(Vinyl Chloride)	ACGIH	TWA, respirable fraction	1 mg/m3	
Poly(Vinyl Chloride)	OSHA	TWA, as vinyl chloride monomer	1 ppm	Skin Notation*; 29 CFR 1910.1017
Poly(Vinyl Chloride)	OSHA	STEL, as vinyl chloride monomer	5 ppm	Skin Notation*; 29 CFR 1910.1017
Titanium oxide (TiO2)	ACGIH	TWA	10 mg/m3	
Titanium oxide (TiO2)	OSHA	TWA, as total dust	15 mg/m3	
Xylene	ACGIH	TWA	100 ppm	
Xylene	ACGIH	STEL	150 ppm	
Xylene	CMRG	TWA	50 ppm	
Xylene	CMRG	STEL	75 ppm	
Xylene	OSHA	TWA	435 mg/m3	

* 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.

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:	Black thixotropic paste, slight solvent odor.
General Physical Form:	Solid
Autoignition temperature	>=750 ºF
Flash Point	No flash point
Flammable Limits(LEL)	*Not Applicable*
Flammable Limits(UEL)	*Not Applicable*
Boiling Point	280 ºF
Density	1.18 g/ml
Vapor Density	*No Data Available*

Vapor Pressure	*No Data Available*
Specific Gravity	1.18 [*Details:* Water = 1]
pH	*Not Applicable*
Melting point	*No Data Available*
Solubility in Water	Nil
Evaporation rate	*Not Applicable*
Hazardous Air Pollutants	7.2 % weight [*Test Method:* Calculated]
Kow - Oct/Water partition coef	*No Data Available*
VOC Less H2O & Exempt Solvents	79 g/l [*Test Method:* tested per EPA method 24]
VOC Less H2O & Exempt Solvents	0.66 lb/gal [*Test Method:* tested per EPA method 24]
VOC Less H2O & Exempt Solvents	4.8 % [*Test Method:* tested per EPA method 24]
Viscosity	*No Data Available*
Solids Content	> 95 %

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
None known

10.2 Materials to avoid
Water

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

Substance	Condition
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Cyanide	During Combustion
Oxides of Nitrogen	During Combustion
Oxides of Sulfur	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 waste product in a sanitary landfill. As a disposal alternative, incinerate in an industrial or commercial facility in the presence of a combustible material. Combustion products will include HCl. Facility must be capable of handling halogenated materials.

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14:TRANSPORT INFORMATION

ID Number(s):
60-9801-0570-8, 62-5223-5235-0, 62-5573-5231-7

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

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact manufacturer 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
Xylene	1330-20-7	< 5.5
Xylene (Benzene, 1,2-dimethyl-)	1330-20-7	< 5.5
Xylene (Benzene, 1,3-dimethyl-)	1330-20-7	< 5.5
Xylene (Benzene, 1,4-dimethyl-)	1330-20-7	< 5.5
Xylene (Benzene, dimethyl-)	1330-20-7	< 5.5
Ethylbenzene	100-41-4	< 1.6

STATE REGULATIONS

Contact manufacturer for more information

CALIFORNIA PROPOSITION 65

Ingredient	C.A.S. No.	Classification
Ethylbenzene	100-41-4	**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 manufacturer for more information

INTERNATIONAL REGULATIONS

Contact manufacturer for more information

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:** 0 **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 3: Potential effects from eye contact was modified.
Section 3: Potential effects from inhalation information was modified.
Section 5: Unusual fire and explosion hazard information was modified.
Section 7: Handling information was modified.
Section 7: Storage information was modified.
Section 8: Engineering controls information was modified.
Section 8: Respiratory protection information was modified.
Section 13: Waste disposal method information was modified.
Section 15: International regulations information was modified.
Section 15: State regulations information was modified.
Section 15: US federal regulations information was modified.
Section 8: Respiratory protection - recommended respirators was modified.
Section 3: Other health effects information was modified.
Section 15: Inventories information was modified.
Section 9: Property description for optional properties 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 15: EPCRA 313 information was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 6: Personal precautions information was modified.
Section 6: Environmental procedures information was modified.
Section 6: Methods for cleaning up information was modified.
Section 13: EPA hazardous waste number (RCRA) heading was added.
Section 13: EPA hazardous waste number (RCRA) information was added.
Section 9: Property description for required properties was added.
Section 8: Respiratory protection - recommended respirators punctuation was deleted.

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