



Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Marine High Strength Repair Filler, P.N. 46012 (pint); 46013 (quart); 46014 (gallon)
MANUFACTURER: 3M
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: 08/18/2005
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Product Use:

Specific Use: Marine Filler

SECTION 2: INGREDIENTS

<u>Ingredient</u>	<u>C.A.S. No.</u>	<u>% by Wt</u>
Polymer Esters - NJ Trade Secret Registry No. 04499600-6383P and No. 04499600-6384P	Trade Secret	30 - 60
STYRENE MONOMER	100-42-5	15 - 40
OXIDE GLASS CHEMICALS	65997-17-3	10 - 30
INERT FILLER - NJ Trade Secret Registry No. 04499600-6169P	Trade Secret	7 - 13
AMORPHOUS SILICA	7631-86-9	3 - 7
TALC	14807-96-6	1 - 5
SYNTHETIC AMORPHOUS SILICA, CRYSTALLINE FREE	112945-52-5	1 - 5
POLYETHYLENE	9002-88-4	0.5 - 1.5
TRIETHYL PHOSPHATE	78-40-0	0.1 - 0.5
BUTYL BENZYL PHTHALATE	85-68-7	0.1 - 0.5
DIMETHYLANILINE	121-69-7	0.05 - 0.15

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste

Odor, Color, Grade: grayish brown paste, styrenic odor

General Physical Form: Liquid

Immediate health, physical, and environmental hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back. Contains a chemical or chemicals which can cause cancer. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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.

May be absorbed through skin and cause target organ effects.

Inhalation:

Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

During grinding, scraping, sanding:

Silicosis: Signs/symptoms may include breathlessness, weakness, chest pain, persistent cough, increased amounts of sputum, and heart disease.

Pneumoconiosis: Sign/symptoms may include persistent cough, breathlessness, chest pain, increased amounts of sputum, and changes in lung function tests.

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.

Prolonged or repeated exposure may cause:

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

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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>
GLASSWOOL FIBERS (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	NONE	Group 2B	International Agency for Research on Cancer
GLASSWOOL FIBERS (AIRBORNE PARTICLES OF RESPIRABLE SIZE)	NONE	Anticipated human carcinogen	National Toxicology Program Carcinogens
STYRENE MONOMER	100-42-5	Group 2B	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 for at least 15 minutes. 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	88.0 °F
Flammable Limits - LEL	1.1 %
Flammable Limits - UEL	6.1 %

5.2 EXTINGUISHING MEDIA

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

5.3 PROTECTION OF FIRE FIGHTERS

Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA). Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

Unusual Fire and Explosion Hazards: Flammable liquid and vapor. Closed containers exposed to heat from fire may build pressure and explode. Vapors may travel long distances along the ground or floor to an ignition source and flash back.

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. Remove all ignition sources such as flames, smoking materials, and electrical spark sources. Use only non-sparking tools. 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. Contain spill. For larger spills, cover drains and build dikes to prevent entry into sewer systems or bodies of water. Cover spill area with a fire-extinguishing foam. An aqueous film forming foam (AFFF) is recommended. 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. Collect as much of the spilled material as possible using non-sparking tools. 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. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. Seal the container. 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 with vapors, mists, or spray. Avoid skin contact. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid breathing of vapors, mists or spray. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits. If ventilation is not adequate, use respiratory protection equipment. Do not ingest. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Keep away from heat, sparks, open flame, pilot lights and other sources of ignition. Ground containers securely when transferring contents. Wear low static or properly grounded shoes. Avoid static discharge. Avoid contact with oxidizing agents. Keep out of the reach of children.

7.2 STORAGE

Store away from acids. Store away from heat. Store away from oxidizing agents. Store out of direct sunlight. Keep container tightly closed. Keep container in well-ventilated area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control dust, fume, or airborne particles. If ventilation is not adequate, use respiratory protection equipment. 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. Provide local exhaust ventilation at transfer points. Provide appropriate local exhaust for cutting, grinding, sanding or machining. Provide appropriate local exhaust ventilation on open containers.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection

Avoid eye contact with vapors, mists, or spray.

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: Polyvinyl Alcohol (PVA).

8.2.3 Respiratory Protection

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

Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece air-purifying respirator with organic vapor/acid gas cartridges and P95 particulate prefilters, Half facepiece air-purifying respirator with organic vapor/acid gas cartridges and N95 particulate prefilters, Half facepiece air-purifying respirator with organic vapor/acid gas cartridges and P100 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P95 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and N95 particulate prefilters, Half facepiece or fullface air-purifying respirator with organic vapor cartridges and P100 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

<u>Ingredient</u>	<u>Authority</u>	<u>Type</u>	<u>Limit</u>	<u>Additional Information</u>
DIMETHYLANILINE	ACGIH	TWA	5 ppm	Skin Notation*; Table A4
DIMETHYLANILINE	ACGIH	STEL	10 ppm	Skin Notation*; Table A4
DIMETHYLANILINE	OSHA	TWA	5 ppm	Skin Notation*; Table Z-1A
DIMETHYLANILINE	OSHA	STEL	10 ppm	Skin Notation*; Table Z-1A
OXIDE GLASS CHEMICALS	3M	TWA, as dust	10 mg/m3	
AMORPHOUS SILICA	CMRG	TWA, as respirable dust	3 mg/m3	
STYRENE MONOMER	ACGIH	TWA	20 ppm	Skin Notation*; Table A4
STYRENE MONOMER	ACGIH	STEL	40 ppm	Skin Notation*; Table A4
STYRENE MONOMER	OSHA	TWA, Vacated	50 ppm	
STYRENE MONOMER	OSHA	TWA	100 ppm	Table Z-2
STYRENE MONOMER	OSHA	STEL, Vacated	100 ppm	
STYRENE MONOMER	OSHA	CEIL	200 ppm	Table Z-2
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
ZIRCONIUM COMPOUNDS	ACGIH	TWA, as Zr	5 mg/m3	Table A4
ZIRCONIUM COMPOUNDS	ACGIH	STEL, as Zr	10 mg/m3	Table A4
ZIRCONIUM COMPOUNDS	OSHA	TWA, as Zr	5 mg/m3	Table Z-1A
ZIRCONIUM COMPOUNDS	OSHA	STEL, as Zr	10 mg/m3	Table Z-1A

* 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:	grayish brown paste, styrenic odor
General Physical Form:	Liquid
Autoignition temperature	<i>No Data Available</i>
Flash Point	88.0 °F
Flammable Limits - LEL	1.1 %
Flammable Limits - UEL	6.1 %
Boiling point	293.00 °F [<i>Details:</i> CONDITIONS: (Styrene)]
Density	1.3 g/ml
Vapor Density	3.60 [<i>Ref Std:</i> AIR=1] [<i>Details:</i> CONDITIONS: (Styrene)]
Vapor Pressure	4.3000 mmHg [<i>Details:</i> CONDITIONS: at 20 C (Styrene)]
Specific Gravity	1.3 [<i>Ref Std:</i> 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>
Percent volatile	<i>Not Applicable</i>
Viscosity	740000 - 999999 centipoise

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong acids; Strong bases; Strong oxidizing agents Additional Information: Storage at elevated temperatures will shorten shelf life.

Hazardous Polymerization: Hazardous polymerization will not occur.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Hydrocarbons	Not Specified
Carbon monoxide	Not Specified
Carbon dioxide	Not Specified
Toxic Vapor, Gas, Particulate	Not Specified

Hazardous Decomposition: Normal use of this product can generate styrene oxide (CAS No. 96-09-3). Styrene oxide is listed as a Group 2A carcinogen by IARC and is listed as a carcinogen in the California Proposition 65 regulations.

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. As a disposal alternative, incinerate uncured product in an industrial or commercial incinerator.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

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

SECTION 14: TRANSPORT INFORMATION

LB-T100-0197-2, LB-T100-0197-3, LB-T100-0197-4

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

Contact 3M for more information.

311/312 Hazard Categories:

Fire Hazard - Yes 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>
STYRENE MONOMER	100-42-5	15 - 40

STATE REGULATIONS

Contact 3M for more information.

CALIFORNIA PROPOSITION 65

Ingredient

GLASSWOOL FIBERS (AIRBORNE
PARTICLES OF RESPIRABLE SIZE)

C.A.S. No.

NONE

Classification

**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.

Additional Information: This product is to be used with 3M Marine Creme Hardener, P/N 46069, 46070, 46071. For technical service and product information/support, call 1-877-366-2746 (1-877-3M MARINE).

INTERNATIONAL REGULATIONS

Contact 3M for more information.

WHMIS: Hazardous

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: 3 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.

Reason for Reissue: Update MSDS

Revision Changes:

Section 5: Flammable limits (UE) information was modified.

Section 5: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (LEL) information was modified.

Section 9: Flammable limits (UEL) information was modified.

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