Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Bondo Lightweight Body Filler 7653077
MANUFACTURER: 3M
DIVISION: Automotive Aftermarket
ADDRESS: 3M Center
St. Paul, MN 55144-1000

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

Issue Date: 04/23/09
Supercedes Date: 11/06/08
Document Group: 25-0817-4

Product Use:
Intended Use: Automotive

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE</td>
<td>1317-65-3</td>
<td>15 - 40</td>
</tr>
<tr>
<td>Unsaturated Polyester Resin</td>
<td>Trade Secret</td>
<td>15 - 40</td>
</tr>
<tr>
<td>TALC</td>
<td>14807-96-6</td>
<td>10 - 30</td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>100-42-5</td>
<td>10 - 30</td>
</tr>
<tr>
<td>MAGNESIUM CARBONATE</td>
<td>546-93-0</td>
<td>5 - 10</td>
</tr>
<tr>
<td>SODIUM SILICATE</td>
<td>1344-09-8</td>
<td>3 - 7</td>
</tr>
<tr>
<td>QUATERNARY AMMONIUM COMPOUNDS, BIS(HYDROGENATED TALLOW ALKYLDIMETHYL, SALTS WITH MONTMORILLONITE</td>
<td>68911-87-5</td>
<td>1 - 5</td>
</tr>
<tr>
<td>QUARTZ SILICA</td>
<td>14808-60-7</td>
<td>&lt;= 0.49947</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Paste
Odor, Color, Grade: Thick fiberous paste, styrene 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.

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.

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

Prolonged or repeated exposure may cause:
  Pneumoconiosis: Signs/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.

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

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

Prolonged or repeated exposure may cause:
  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.

  Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

  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.
Immunological Effects: Signs/symptoms may include alterations in the number of circulating immune cells, allergic skin and /or respiratory reaction, and changes in immune function.

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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Class Description</th>
<th>Regulation</th>
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<tr>
<td>QUARTZ SILICA</td>
<td>14808-60-7</td>
<td>Group 1</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>QUARTZ SILICA</td>
<td>14808-60-7</td>
<td>Known human carcinogen</td>
<td>National Toxicology Program Carcinogens</td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>100-42-5</td>
<td>Group 2B</td>
<td>International Agency for Research on Cancer</td>
</tr>
</tbody>
</table>

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>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>80 °F - 82 °F [Test Method: Closed Cup]</td>
</tr>
<tr>
<td>Flash Point</td>
<td>26.67 - 27.78 °C [Test Method: SETAFLASH]</td>
</tr>
<tr>
<td>Flammable Limits - LEL</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flammable Limits - UEL</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>

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

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
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. No smoking while handling this material. Avoid breathing of vapors, mists or spray. Avoid static discharge. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Do not breathe dust. Avoid contact with oxidizing agents.

7.2 STORAGE

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use with appropriate local exhaust ventilation. Use in an enclosed process area is recommended. Provide appropriate local exhaust for cutting, grinding, sanding or machining. 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. 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), Polyethylene/Ethylene Vinyl Alcohol.

### 8.2.3 Respiratory Protection
Avoid breathing of vapors, mists or spray. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not breathe vapors. Do not breathe dust.

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 organic vapor cartridges and P95 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. Not applicable.

### 8.3 EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIMESTONE</td>
<td>ACGIH</td>
<td>TWA, respirable</td>
<td>10 mg/m3</td>
<td></td>
</tr>
<tr>
<td>LIMESTONE</td>
<td>OSHA</td>
<td>TWA, respirable</td>
<td>5 mg/m3</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>LIMESTONE</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m3</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>MAGNESIUM CARBONATE</td>
<td>OSHA</td>
<td>TWA, respirable</td>
<td>5 mg/m3</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>MAGNESIUM CARBONATE</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m3</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>QUARTZ SILICA</td>
<td>ACGIH</td>
<td>TWA, respirable</td>
<td>0.025 mg/m3</td>
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</tr>
<tr>
<td>QUARTZ SILICA</td>
<td>OSHA</td>
<td>TWA, respirable</td>
<td>0.1 mg/m3</td>
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<tr>
<td>STYRENE MONOMER</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm</td>
<td>Skin Notation*; Table A4</td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>ACGIH</td>
<td>STEL</td>
<td>40 ppm</td>
<td>Skin Notation*; Table A4</td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>OSHA</td>
<td>TWA, Vacated</td>
<td>50 ppm</td>
<td></td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>OSHA</td>
<td>TWA</td>
<td>100 ppm</td>
<td>Table Z-2</td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>OSHA</td>
<td>STEL, Vacated</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td>STYRENE MONOMER</td>
<td>OSHA</td>
<td>CEIL</td>
<td>200 ppm</td>
<td>Table Z-2</td>
</tr>
<tr>
<td>TALC</td>
<td>ACGIH</td>
<td>TWA, respirable</td>
<td>2 mg/m3</td>
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</tr>
<tr>
<td>TALC</td>
<td>CMRG</td>
<td>TWA, as respirable dust</td>
<td>0.5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>TALC</td>
<td>OSHA</td>
<td>TWA, respirable</td>
<td>2 mg/m3</td>
<td>Table Z-1A</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: Thick fiberous paste, styrene odor
General Physical Form: Liquid
Autoignition temperature No Data Available
Flash Point 80 °F - 82 °F [Test Method: Closed Cup]
Flash Point 26.67 - 27.78 °C [Test Method: SETAFLASH]
Flammable Limits - LEL No Data Available
Flammable Limits - UEL No Data Available
Boiling point 293.00 °F [Details: CONDITIONS: (Styrene)]
Density 9.5126 lb/gal
Density 1.14 g/ml
Vapor Density No Data Available
Vapor Pressure 5.2 mmHg [Details: CONDITIONS: at 20 C]
Specific Gravity 1.14
pH No Data Available
Melting point No Data Available
Solubility in Water Nil
Evaporation rate No Data Available
Volatile Organic Compounds 1.54 lb/gal [Test Method: calculated SCAQMD rule 443.1] [Details: Excluding exempt cmpds]
Volatile Organic Compounds 184.33 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: Excluding exempt cmpds]
Volatile Organic Compounds 16.17 % [Test Method: calculated SCAQMD rule 443.1] [Details: Excluding exempt cmpds]
Volatile Organic Compounds 525.57 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: European VOC Content]
Percent volatile 21.03 %
VOC Less H2O & Exempt Solvents 185.03 g/l [Test Method: calculated SCAQMD rule 443.1]
Viscosity No Data Available

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong acids; Strong bases; Strong oxidizing agents

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>Hydrocarbons</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Styrene Oxide</td>
<td>Not Specified</td>
</tr>
<tr>
<td>Toxic Vapor, Gas, Particulate</td>
<td>Not Specified</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 a permitted hazardous waste incinerator. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

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

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

SECTION 14: TRANSPORT INFORMATION

LB-K100-0572-8

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):
### 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>SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE)</td>
<td>NONE</td>
<td><strong>Carcinogen</strong></td>
</tr>
</tbody>
</table>

** 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.

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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:** The MSDS has been revised because 3M has adopted the 16-section ANSI/ISO format. The potential hazards of the product have not changed. We encourage you to reread the MSDS and review the information.

Revision Changes:
- Section 1: Product name was modified.
- Copyright was modified.
- Page Heading: Product name was modified.
Section 2: Ingredient table was modified.

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