Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Bondo(r) MEKP Liquid Hardener, P.N. 411, 609, 912, 912C, 912ES, 7653081
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: 05/14/09
Supercedes Date: 11/12/08
Document Group: 24-2129-5

Product Use:
Intended Use: Automotive
Specific Use: Curing Agent

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMETHYL PHTHALATE</td>
<td>131-11-3</td>
<td>30 - 60</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE PEROXIDE</td>
<td>1338-23-4</td>
<td>15 - 40</td>
</tr>
<tr>
<td>2,2,4-TRIMETHYL-1,3-PENTANEDIOL DIISOBUTYRATE</td>
<td>6846-50-0</td>
<td>10 - 30</td>
</tr>
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<td>METHYL ETHYL KETONE</td>
<td>78-93-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>HYDROGEN PEROXIDE</td>
<td>7722-84-1</td>
<td>0.5 1.5</td>
</tr>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>0.5 1.5</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: Slight odor. Clear.
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: 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. May cause chemical
eye burns. May cause severe skin irritation. May cause chemical gastrointestinal burns. May cause target organ effects.

3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Skin Contact:
Severe Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, dryness, cracking, blistering, and pain.

Dermal Effects: Signs/symptoms may include changes in skin pigmentation and/or coloration.

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

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

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.

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: Immediately flush eyes with large amounts of water for at least 15 minutes. Get immediate 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. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get immediate 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>&gt; 200 °F [Test Method: Closed Cup] [Details: No flash to boiling point.]</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: 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. Part of the oxygen for combustion is supplied by the peroxide itself.

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. 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. 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. 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. Collect the resulting residue containing solution. Place in a metal container approved for transportation by appropriate authorities. 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. Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid breathing of vapors, mists or spray. Avoid skin contact. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children. Avoid breathing of dust created by cutting, sanding, grinding or machining. Avoid contact with oxidizing agents.

7.2 STORAGE

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Provide appropriate local exhaust for cutting, grinding, sanding or machining. Use in a well-ventilated area. 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. Avoid eye contact with vapors, mists, or spray. 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, 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. Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Fullface supplied-air respirator, 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.

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>DIMETHYL PHTHALATE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td></td>
</tr>
<tr>
<td>DIMETHYL PHTHALATE</td>
<td>OSHA</td>
<td>TWA</td>
<td>5 mg/m³</td>
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<td>HYDROGEN PEROXIDE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>1 ppm</td>
<td>Table A3</td>
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<tr>
<td>HYDROGEN PEROXIDE</td>
<td>OSHA</td>
<td>TWA</td>
<td>1 ppm</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>OSHA</td>
<td>TWA</td>
<td>200 ppm</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>ACGIH</td>
<td>STEL</td>
<td>300 ppm</td>
<td></td>
</tr>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>OSHA</td>
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<td>300 ppm</td>
<td>Table Z-1A</td>
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<tr>
<td>METHYL ETHYL KETONE PEROXIDE</td>
<td>ACGIH</td>
<td>CEIL</td>
<td>0.2 ppm</td>
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<td>METHYL ETHYL KETONE PEROXIDE</td>
<td>OSHA</td>
<td>CEIL</td>
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</table>

SOURCE OF EXPOSURE LIMIT DATA:
SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade: Slight odor. Clear.
General Physical Form: Liquid
Autoignition temperature
No Data Available
Flash Point > 200 ºF [Test Method: Closed Cup] [Details: No flash to boiling point.]
Flammable Limits - LEL No Data Available
Flammable Limits - UEL No Data Available
Boiling point 244 ºF
Vapor Density No Data Available
Vapor Pressure No Data Available
Specific Gravity 1.128 [Ref Std: WATER=1]
pH No Data Available
Melting point No Data Available
Solubility In Water No Data Available
Solubility in Water Negligible
Evaporation rate No Data Available
Volatile Organic Compounds 902.40 g/l [Test Method: calculated SCAQMD rule 443.1] [Details: Excluding exempt compounds]
Percent volatile 9.7 % weight
VOC Less H2O & Exempt Solvents 912.71 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 oxidizing agents; Light; Alkali and alkaline earth metals; Strong acids; Sparks and/or flames; Temperatures above the boiling point

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>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

SECTION 11: TOXICOLOGICAL INFORMATION
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 in the presence of a combustible material. As a disposal alternative, dispose of waste product in a permitted hazardous waste facility.

EPA Hazardous Waste Number (RCRA): D035 (Methyl ethyl ketone)

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

SECTION 14: TRANSPORT INFORMATION

ID Number(s):
LB-K100-0541-8, LB-K100-0541-9, LB-K100-0543-3, 60-4550-4813-6, 70-0080-0017-9, 70-0080-0036-9, 70-0080-0165-6, 70-0080-0171-4

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 - 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>

Page 6 of 8
DIMETHYL PHTHALATE  

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>
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<tbody>
<tr>
<td>DIMETHYL PHTHALATE</td>
<td>131-11-3</td>
<td>Toxic Substances Control Act (TSCA) 4 Test Rule Chemicals</td>
<td>Applicable</td>
</tr>
</tbody>
</table>

**STATE REGULATIONS**

Contact 3M for more information.

**CHEMICAL INVENTORIES**

The components of this product are in compliance with the chemical notification requirements of TSCA.

The components of this product are listed on the Canadian Domestic Substances List.

Contact 3M for more information.

**INTERNATIONAL REGULATIONS**

Contact 3M 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: 3
- 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.

**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 14: ID Number(s) Template 1 was modified.
Section 15: TSCA section 12[b] information was modified.

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