Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M™ Bondo Red Cream Hardener 307, 913, 913C, 913ES, 928, 928C, 9307, 7653079, 810505D, 510506D, 810507D

MANUFACTURER: 3M

DIVISION: Automotive Aftermarket

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

Issue Date: 09/21/09
Supercedes Date: 09/21/09

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

Document Group: 24-2136-0

Product Use:
   Intended Use: Automotive
   Specific Use: Catalyst for Automotive Body Fillers

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>94-36-0</td>
<td>30 - 60</td>
</tr>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>10 - 30</td>
</tr>
<tr>
<td>BENZOIC ACID, C9-11-BRANCHED ALKYL ESTERS</td>
<td>131298-44-7</td>
<td>10 - 20</td>
</tr>
<tr>
<td>ZINC STEARATE</td>
<td>557-05-1</td>
<td>3 - 7</td>
</tr>
<tr>
<td>OXIRANE, POLYMER WITH METHYLOXIRANE, MONOBUTYL ETHER</td>
<td>9038-95-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>CALCIUM SULFATE</td>
<td>7778-18-9</td>
<td>1 - 5</td>
</tr>
<tr>
<td>IRON OXIDE (FE2O3)</td>
<td>1309-37-1</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Viscous
Odor, Color, Grade: Red paste with slight ester odor
General Physical Form: Solid
Immediate health, physical, and environmental hazards: Closed containers exposed to heat from fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive. May cause allergic skin reaction.

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:
Mild Skin Irritation: Signs/symptoms may include localized redness, swelling, and itching.

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.

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.

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:
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.

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>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits - LEL</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits - UEL</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

5.2 EXTINGUISHING MEDIA

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

Water from a safe distance - preferably with a fog nozzle. In case of small fires, other means such as carbon dioxide, foam or dry chemical extinguishers may be effective.

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:  Closed containers exposed to heat from fire may build pressure and explode. Dust clouds of this material in combination with an ignition source may be explosive. Fire hazard increases when material becomes dry. 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:
Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel. 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.

Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible. 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.
Contain spill. Collect as much of the spilled material as possible using non-sparking tools. Use wet sweeping compound or water to avoid dusting. Sweep up. 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
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. Avoid static discharge. 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 eye contact with dust or airborne particles.

7.2 STORAGE
Store away from heat. Store out of direct sunlight. Keep container tightly closed. Do not heat under confinement to avoid risk of explosion. Storage at elevated temperatures will shorten shelf life.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
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. 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.

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: Polyethylene/Ethylene Vinyl Alcohol. Use an additional glove (e.g. supported PVC or Nitrile) over the PE/EVAL glove, and change the over-glove frequently.

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: Half facepiece or full face 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
### Material Safety Data Sheet

**3M™ Bondo Red Cream Hardener**

**307, 913, 913C, 913ES, 928, 928C, 9307, 7653079, 810505D, 510506D, 810507D**

**Date:** 09/21/09

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### Ingredient

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
</tr>
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<tbody>
<tr>
<td>BENZYL PEROXIDE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Table A4</td>
</tr>
<tr>
<td>BENZYL PEROXIDE</td>
<td>OSHA</td>
<td>TWA</td>
<td>5 mg/m³</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>CALCIUM SULFATE</td>
<td>ACGIH</td>
<td>TWA, inhalable fraction</td>
<td>10 mg/m³</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>CALCIUM SULFATE</td>
<td>OSHA</td>
<td>TWA, respirable</td>
<td>5 mg/m³</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>CALCIUM SULFATE</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m³</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>IRON OXIDE (Fe2O3)</td>
<td>ACGIH</td>
<td>TWA, respirable</td>
<td>5 mg/m³</td>
<td>Table A4</td>
</tr>
<tr>
<td>IRON OXIDE (Fe2O3)</td>
<td>OSHA</td>
<td>TWA, as fume</td>
<td>10 mg/m³</td>
<td>Table Z-1A</td>
</tr>
<tr>
<td>STEARATES</td>
<td>ACGIH</td>
<td>TWA, as total dust</td>
<td>10 mg/m³</td>
<td>Table A4</td>
</tr>
<tr>
<td>ZINC STEARATE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>ZINC STEARATE</td>
<td>ACGIH</td>
<td>STEL</td>
<td>20 mg/m³</td>
<td></td>
</tr>
<tr>
<td>ZINC STEARATE</td>
<td>OSHA</td>
<td>TWA, respirable</td>
<td>5 mg/m³</td>
<td>Table Z-1</td>
</tr>
<tr>
<td>ZINC STEARATE</td>
<td>OSHA</td>
<td>TWA, Vacated, as dust</td>
<td>10 mg/m³</td>
<td></td>
</tr>
<tr>
<td>ZINC STEARATE</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m³</td>
<td>Table Z-1</td>
</tr>
</tbody>
</table>

VAC Vacated PEL: Vacated Permissible Exposure Limits [PEL] are enforced as the OSHA PEL in some states. Check with your local regulatory agency.

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### 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)

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Specific Physical Form:**
Viscous

**Odor, Color, Grade:**
Red paste with slight ester odor

**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**
*No Data Available*

**Density**
*No Data Available*

**Vapor Density**
*Not Applicable*

**Vapor Pressure**
*Not Applicable*

**Specific Gravity**
1.2 [ @ 25 °C] [Ref Std: WATER=1]

**pH**
*No Data Available*

**Melting point**
*No Data Available*

**Solubility in Water**
Negligible

**Evaporation rate**
*Not Applicable*

**Hazardous Air Pollutants**
0 % weight

**Volatile Organic Compounds**
0 lb/gal [Test Method: calculated SCAQMD rule 443.1] [Details: excluding exempt compounds]

**Kow - Oct/Water partition coef**
*No Data Available*

**Percent volatile**
20 % [Details: Water is the volatile component]

**VOC Less H2O & Exempt Solvents**
0 g/l [Test Method: calculated SCAQMD rule 443.1]

**Viscosity**
*No Data Available*
SECTION 10: STABILITY AND REACTIVITY

Stability: Stable. Stable unless exposed to heat, flames and drying conditions.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
Heat

10.2 Materials to avoid
Accelerators

Additional Information: Storage at elevated temperatures will shorten shelf life.

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>Not Specified</td>
</tr>
<tr>
<td>Carbon dioxide</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 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): D001 (Ignitable)
Since regulations vary, consult applicable regulations or authorities before disposal.

**SECTION 14: TRANSPORT INFORMATION**

ID Number(s):

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 - Yes
- 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>
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<tbody>
<tr>
<td>ZINC STEARATE (ZINC COMPOUNDS)</td>
<td>557-05-1</td>
<td>3 - 7</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>94-36-0</td>
<td>30 - 60</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.

Contact 3M for more information.

**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: 1  Reactivity: 1  Special Hazards: Oxidizer

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 6: Release measures information was deleted.
Section 10: Materials and conditions to avoid physical property was deleted.
Section 9: Property description for optional properties was modified.
Section 14: ID Number(s) Template 1 was modified.
10.1 Conditions to avoid was added.
10.2 Materials to avoid was added.
Section 6: Release measures information was added.
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Section 10: Materials to avoid physical property was added.
Section 10: Conditions to avoid physical property was added.

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