



## Material Safety Data Sheet

Date of Preparation: October 24, 2005

### Section 1 - Product Information

**Product Name:** LIQUID HARDENER  
**Product Code:** 20126, 411, 609, 912, 912C  
**Emergency Phone:** Chemtrec 800-424-9300  
**Company:** Bondo Corporation  
3700 Atlanta Industrial Parkway NW  
Atlanta, GA 30331

**Revision Number:** 1  
**Intended Use:** Curing agent.

### Emergency Overview

**Signs of Overexposure:** Coughing, Pulmonary edema (fluid build-up in the lungs), Intestinal upset (nausea, vomiting, diarrhea), central nervous system effects (dizziness, drowsiness, weakness, fatigue, headache, unconsciousness), Mental dullness,

**Emergency First Aid:** Flush eyes for 20 minutes. Get immediate medical attention. Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with head down. Contact physician for advise about whether to induce vomiting. Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. Get medical attention immediately Wash with soap and water. Get medical attention.

**Handling:** Do not contact or breathe the material. Use only in a well ventilated area.

**Material Physical Appearance:** Colorless

**Fire Fighting:** Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do Not direct a stream of water into the hot burning liquid.

Your local fire department may require that you display the NFPA 704 diamond symbol on the front and/or rear entrance to your building.

**NFPA 704:** Health: 3, Fire: 1, Reactivity:

Bondo Corporation has no oversight with respect to the guidance practices or policies or manufacturing processes of other companies handling or using this material. The information given in this MSDS is only related to the product as shipped in its original condition. The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks as required by regulations.

### Section 2 - Hazardous Ingredients

Chemical Name	%	CAS#	OSHA Exposure Limits
Dimethylphthalate	40.0 - 50.0	131-11-3	5 mg/m <sup>3</sup> TWA
Methyl ethyl ketone peroxide	30.0 - 40.0	1338-23-4	No PEL established
2,2,4-trimethyl-1-3-pentanediol, diisobutyrate	10.0 - 20.0	6846-50-0	No PEL established
Methyl ethyl ketone	1.0 - 5.0	78-93-3	200 ppm TWA; 590 mg/m <sup>3</sup> TWA

### Section 3 – Hazards Identification

**Routes of Entry:** Eye contact, Inhalation, Skin contact,

**Target Organs Potentially Affected by Exposure:** Eyes, Respiratory Tract, Digestive Tract, Skin, Nervous System,

**Chemical Interactions That Change Toxicity:** None Known,

**Medical Conditions Aggravated by Exposure:** Eye disease, Respiratory disease including asthma and bronchitis, Digestive tract disease, Skin disease including eczema and sensitization,

#### **Immediate (Acute) Health Effects by Route of Exposure**

**Inhalation Irritation:** Can be corrosive to the respiratory tract causing severe irritation and tissue damage.

**Inhalation Toxicity:** Vapor harmful. May affect the brain or nervous system causing dizziness, headache or nausea. Causes nose and throat irritation. Causes lung irritation.

**Skin Contact:** Can cause severe irritation, defatting, and dermatitis. Irritation effects may last for hours or days but will not likely result in permanent damage.

**Skin Absorption:** No absorption hazard in normal industrial use.

**Eye contact:** Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in tearing and reddening, but not likely to permanently injure eye tissue. Temporary vision impairment (cloudy or blurred vision) is possible.

**Ingestion Irritation:** Severely irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

**Ingestion Toxicity:** Harmful if swallowed. May cause systemic poisoning.

#### **Long-Term (Chronic) Health Effects**

**Carcinogenicity:** None of the substances have been shown to cause cancer in long term animal studies. Not a carcinogen according to NTP, IARC, or OSHA. ,

**Reproductive and Developmental Toxicity:** No data available to indicate product or any components present at greater than 0.1% may cause birth defects.

**Mutagenicity:** No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.

**Inhalation:** Upon prolonged and/or repeated exposure, can be corrosive to the respiratory tract causing severe irritation and tissue damage.

**Skin Contact:** Upon prolonged or repeated contact can cause severe irritation, defatting, and dermatitis. May cause lingering affects but not likely to result in permanent damage if the exposure is eliminated.

**Skin Absorption:** Upon prolonged or repeated exposure, no hazard in normal industrial use.

**Ingestion:** Harmful if swallowed. May cause systemic poisoning.

### **Section 4 – First Aid Measures**

**Inhalation:** Remove to fresh air. If breathing is difficult, get medical attention immediately. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical attention immediately.

**Eyes:** Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician. In case of eye contact, flush immediately with plenty of water for at least 15 minutes and get medical attention immediately; for skin, wash thoroughly with soap and water.

**Skin Contact:** Wash with soap and water. Remove contaminated clothing, launder immediately, and discard contaminated leather goods. Get medical attention immediately. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean contaminated shoes.

**Ingestion:** Severely irritating. Do not induce vomiting. Seek medical attention immediately. Drink 2 glasses of water or milk to dilute. If swallowed, do not induce vomiting. Get medical attention immediately.

**Notes to Doctor:** No additional first aid information available

## Section 5 – Fire Fighting Measures

**Flammability Summary:** Combustible at elevated temperatures

**Extinguishing Media:** Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire. Do Not direct a stream of water into the hot burning liquid.

**Fire and/or Explosion Hazards:** Material may be ignited only if preheated to temperatures above the high flash point, for example in a fire.

**Fire Fighting Methods and Protection:** Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment.

**Hazardous Combustion Products:** Carbon dioxide, Carbon monoxide,

**Flash Point (SFCC):** No Flash to Boiling Point

**Lower Flammable/Explosive Limit:** Not determined

## Section 6 - Accidental Release

**Personal Precautions and Equipment:** Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this MSDS.

**Methods for Clean-up:** Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

## Section 7 – Handling and Storage

**Handling Technical Measures and Precautions:** Toxic or severely irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area.

**Storage Technical Measures and Conditions:** Store in a cool dry place. Isolate from incompatible materials.

## Section 8 – Exposure Controls/Personal Protection

**Engineering Measures:** No exposure limits exist for the constituents of this product. Use local exhaust ventilation or other engineering controls to minimize exposures and maintain operator comfort. Engineering controls must be designed to meet the OSHA chemical specific standard in 29 CFR 1910. Facilities storing or using this material should be equipped with an eyewash and safety shower. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits

**Respiratory Protection:** Respiratory protection must be used when handling this product. Use respirators only if ventilation cannot be used to eliminate symptoms or reduce the exposure to below acceptable levels. A supplied air type respirator may be required. Follow a respiratory protection program that meets 29 CFR 1910.134 and ANSI Z88.2 requirements whenever work place conditions warrant the use of a respirator. Respiratory protection may be required in addition to ventilation depending upon conditions of use.

**Eye Protection:** Wear chemical splash goggles when handling this product. Additionally, wear a face shield when the possibility of splashing of liquid exists. Have an eye wash station available.

Wear goggles and a Face shield

**Skin Protection:** Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Where contact is likely, wear chemical resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield

**Gloves:** Required for prolonged or repeated contact. Use solvent resistant gloves. Barrier creams are not substitutes for full physical protection. Refer to safety equipment supplier for effective glove recommendations.

**Control Parameters:**

Chemical Name	ACGIH TLV-TWA	ACGIH STEL	IDLH
Dimethylphthalate	5 mg/m <sup>3</sup> TWA	Not established	Not determined
Methyl ethyl ketone peroxide	Not established	Not established	Not determined
2,2,4-trimethyl-1-3-pentanediol, diisobutyrate	Not established	Not established	Not determined
Methyl ethyl ketone	200 ppm TWA; 590 mg/m <sup>3</sup> TWA	300 ppm STEL; 885 mg/m <sup>3</sup> STEL	3000 ppm

**Section 9 – Physical and Chemical Properties**

**Physical State:** Liquid

**Color:** Colorless

**Odor:** None Slight Aromatic

**pH:** Not determined

**Solubility in Water:** Negligible; 0-1%

**Volatiles, % by weight:** 9.7

**Volatiles, % by volume:** 9.72

**Volatile Organic Compounds excluding exempt solvents and water:**

0.8 Lb/gallon 96.48 g/l

**Volatile Organic Compounds including exempt solvents and water:**

0.79 LB/gallon 94.7 g/l

**Vapor Density:**

**Vapor Pressure:** Not determined

**Boiling Point:** 118.0000000 deg. C; 244 deg. F

**Specific Gravity:** 1.19

**Weight per Gallon:** 9.7648

**Section 10 – Stability and Reactivity**

**Stability:** Stable under normal conditions.

**Conditions to Avoid:** Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition. Contamination Visible light

**Materials to Avoid/Chemical Incompatibility:** Strong oxidizing agents, Strong acids, Nitrogen oxides, Strong alkalies,

**Hazardous Decomposition Products:** Carbon dioxide, Carbon monoxide,

**Section 11 - Toxicological Information**

**Sensitization** (effects of repeated exposure): No data

**Component Toxicology Data (NIOSH)**

Chemical Name	CAS Number	LD50/LC50
Dimethylphthalate	131-11-3	Oral LD50 Rat : 6800 mg/kg; Oral LD50 Mouse : 6800 mg/kg; Dermal LD50 Rabbit :

Methyl ethyl ketone peroxide	1338-23-4	No data available
2,2,4-trimethyl-1-3-pentanediol, diisobutyrate	6846-50-0	No data available
Methyl ethyl ketone	78-93-3	Inhalation LC50 Rat : 23500 mg/m <sup>3</sup> /8H; Inhalation LC50 Mouse : 32 gm/m <sup>3</sup> /4H; Ora

## Section 12 - Ecological Information

### Overview:

Avoid runoff into ground, storm drains or sewers that lead into waterways. Water runoff may cause environmental damage. There are extensive ecological data available on the various components of these products. An adequate representation of all these data is beyond the scope of this document. Please contact the information phone number found in Section 16.

## Section 13 – Disposal Information

**Waste Description for Spent Product:** Spent or discarded material is not expected to be a hazardous waste.

**Disposal Methods:** Dispose of in accordance with federal, state or provincial and local pollution requirements. Clean preferably with a detergent, avoid the use of solvents. This information applies only to the material as manufactured; processing, use or contamination may make this information inappropriate, inaccurate or incomplete. The generator of the waste has the responsibility for proper waste classification, transportation and disposal.

**Waste Disposal Codes:**

## Section 14 – Transportation Information

<b>DOT Basic Description:</b>	DOT: Consumer Commodity, ORM-D IMDG: Organic Peroxide Type D Liquid (Methyl Ethyl Ketone Peroxide 35%), 5.2, UN 3105, II, LTD QTY, EmS F-J, S-R
<b>Hazard Class:</b>	ORM-D
<b>UN Number:</b>	N/A
<b>Packing Group:</b>	N/A

## Section 15 - Regulatory Information

**Note:** Materials listed in this section may be present as trace level contaminants to raw materials. Check Section 2 - Hazardous Ingredients to determine if a significant amount is present

**OSHA:** This product is considered hazardous under the Federal OSHA Hazard Communication Standard.

**WHMIS:** C D2A, D2B,

**SARA Title III:**

*Section 302 Extremely Hazardous Substances:* None

*Section 311 / 312 Hazard Categories:* Immediate health, delayed health, fire hazard.

*Section 313 Toxic Chemicals:* dimethyl phthalate, Methyl ethyl ketone,

You may be required to submit this MSDS to state and local emergency response agencies (SERC & LEPC) and to your local fire department. Also, you may be affected by other sections of this law, depending on the chemicals and amounts that you inventory at your location. To learn more about your responsibilities, call the EPA Hotline (800) 535-0202

**TSCA status:** All components in this product are on the TSCA Inventory.

**Canadian Domestic Substances List:** The components of this product ARE listed on the Canadian Domestic Substances List.

**Proposition 65:** This product DOES NOT contain a chemical regulated under California Proposition 65.

## **Section 16 - Preparation Information**

Prepared by Bondo Corporation

Information phone number: (404) 696-2730

Do not handle until the manufacturer's safety precautions have been read and understood. Regulations require that all employees be trained on Material Safety Data Sheets for all products with which they come in contact.

While Bondo Corporation believes that the data contained herein are accurate and derived from qualified sources, the data are not to be taken as a warranty or representation for which Bondo Corporation assumes legal responsibility. They are offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with applicable federal, state or provincial and local laws and regulations.