



## *Lead Based Paints Fact Sheet*

### **ECOBOND® LBP**

- Patented and proprietary product uses non-hazardous chemical binders that are U.S. Environmental Protection Agency (EPA) and is approved for use on lead based paints.
- Treatment chemically converts lead contaminants to extremely stable metal-phosphate compounds that virtually eliminate the leaching of metals to the environment with the degradation of paint over time.
- This application is designed with a latex-based paint for application and is provided for the chemical conversion of lead-based paints to a non-hazardous form.

#### DESCRIPTION AND USE

**ECOBOND® LBP**, MT2's coating/conversion technology is a low-cost and highly effective coating and lead treatment applied in a simple-to-use paint formula. The coating chemically stabilizes and converts the lead in Lead Based Paint (LBP), rather than only encapsulating it on the original media surface. This conversion process results in the treated materials passing stringent testing requirements such as the EPA RCRA TCLP. Using the **ECOBOND® LBP** coating results in non-hazardous end products from a wide variety of applications, including routine maintenance; facility renovation; and building renovation, demolition, and component removal.

#### TYPICAL APPLICATIONS

**Primer/Pre-Demo Interior and Exterior Coatings** – can be applied as a pre-demolition coating on interior/exterior surfaces intended for near term demolition, avoiding the issues and costs associated with loose and peeling paint and the potential generation of hazardous LBP materials. Or, it can be applied as a long-term preventative maintenance coating, minimizing current and future environmental lead contamination issues and liability. This allows for application of a client-selected final overcoat as required.

**Stripper** – applied as a stripper for LBP surfaces resulting in LBP removal from surface and produces a non-hazardous residue, avoiding the issues and costs associated with generating hazardous LBP materials. MT2 recommends that the client purchase their desired stripper and MT2 will provide an **ECOBOND® LBP** additive for use with that stripper.

**Coverage Rates** – on average 100 square feet per gallon of paint or stripper.

**Application Equipment** – any application methods used for latex based paints, or selected stripper, may be used in the application process such as paint rollers, hand sprayers or tankard trucks with spray bars.

#### SAFETY PRECAUTIONS

MT2 recommends following safety guidelines as provided by the EPA in the handling of materials suspected of containing lead based paints. Additional safety information regarding **ECOBOND® LBP** may be found on the Material Safety Data Sheet (MSDS).

# Typical ECOBOND® LBP Questions and Answers

## ***Has ECOBOND® LBP received U.S. EPA endorsement?***

U.S. EPA policy prohibits “endorsement” of commercial products or vendors although MT<sup>2</sup> and ECOBOND® technologies are listed on the EPA web site ([www.epareachit.org](http://www.epareachit.org)). Numerous governmental agencies/regulators at local, state and federal levels have concurred with the ECOBOND® LBP hazardous waste prevention approach. Government agencies/regulators include the U.S. EPA Region 8, California EPA, California Department of Toxic Substances Control, U.S. Army Corp of Engineers, U.S. Army and Fort Ord Reuse Authority.

As ECOBOND® LBP is to be applied as a routine maintenance type coating prior to characterization and waste determination, state and federal hazardous waste treatment regulations are not applicable and approval is not required as hazardous waste is neither generated nor treated.

## ***Is ECOBOND® LBP simply “masking” the RCRA TCLP tests in some short-term manner and thus violating the intent of RCRA TCLP?***

ECOBOND® LBP is pH neutral and does not utilize materials providing a simple pH adjustment thus buffering the TCLP acid solution and bypassing the intent of the RCRA TCLP test. MT<sup>2</sup> strongly discourages the use of acidic buffering as a “treatment”.

Rather, ECOBOND® LBP chemical conversion technology utilizes phosphate-based materials, which chemically react with the lead found in LBP to form a new lead-phosphate mineral compound. U.S. EPA approved testing has demonstrated that this lead-phosphate mineral is highly durable to over 1,000 years using MEP’s testing and is virtually insoluble maintaining a solubility log K<sub>sp</sub> factor lower than 10<sup>-8</sup>. These test’s plus others demonstrate that not only does ECOBOND® LBP not violate the RCRA TCLP test but also that it actually outperforms this testing standard.

## ***Following ECOBOND® LBP application is the lead found within the existing LBP made non-toxic and non-hazardous?***

Following ECOBOND® LBP application the lead while converted to a new lead phosphate mineral, is not destroyed nor eliminated and may continue to exhibit potential bioavailability and toxicity.

The new lead phosphate mineral will be non-hazardous, virtually environmentally leach free. Additionally, as result of the new paint coating (encapsulation) the lead is much less likely to spread into the surrounding soil and groundwater and will present a significantly reduced airborne exposure potential to workers and local citizens.



MT2, LLC. (Metals Treatment Technologies)  
14045 W. 66<sup>th</sup> Ave., Arvada, CO 80004  
(888) 435-6645



***Does ECOBOND® LBP provide a solution for severe LBP peeling, requiring surface preparation prior to painting?***

ECOBOND® LBP preventative maintenance primer coating technology can be applied in conjunction with a LBP softener thus allowing for some ability to reduce LBP peeling paint. However, moderate to severe LBP peeling should be properly removed prior to ECOBOND® LBP application.

***Are there any similar products in the marketplace?***

ECOBOND® LBP is uniquely designed to chemically convert lead found within LBP into a non-hazardous new mineral and to remain with the LBP coated structure or component. ECOBOND® LBP is to be applied prior to demolition and disposal or as a preventative maintenance primer coating for structures remaining in use. ECOBOND® LBP achieves full compliance with state and federal architectural coatings standards for VOC's and is non-flammable making it safe for the environment and for workers.

Several other marketplace LBP coatings contain high levels of VOC's (exceeding EPA and state VOC coatings limits, set at 250g/l for California) are flammable and rely on a simple pH adjustments short-circuiting the RCRA TCLP test and potentially exposing the product users to future environmental liability. Most other coatings are also designed for a short-term application and subsequent removal along with the LBP from the surface prior to disposal. Alternate approaches include chemical stripping and abrasive blasting products, which remove the LBP utilizing extensive labor and generating secondary hazardous wastes at an overall substantial higher cost.

***Doesn't ECOBOND® LBP only treat the surface lead found in LBP and does it work on layered LBP?***

ECOBOND® LBP is uniquely designed to penetrate into the layer(s) of LBP providing treatment of surface level as well as available subsurface lead including through multiple layers. These results have been field verified and through laboratory lead speciation and XRD analysis.

***Isn't it cheaper to demolish a structure and utilize a comprehensive mass balance waste sample, thus diluting the LBP material in an attempt to pass RCRA TCLP?***

State and U.S. EPA regulators strongly discourage "dilution as the solution" and under RCRA this practice is strictly prohibited. Additionally, as a waste generator is legally and financially liable for its waste indefinitely, dilution may result in an owners or generators long-term environmental liability even after disposal has occurred.

Alternatively, application of ECOBOND® LBP is inexpensive, roughly equivalent to that of a regular paint coating, and provides added environmental liability reduction through the direct mitigation of lead environmental hazard's. LBP coated surfaces can now be economically segregated from non-coated materials allowing for inexpensive disposal of both LBP coated and non-coated materials with full environmental compliance.



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## PRODUCT DATA: ECOBOND LBP® (Patented) PRE-DEMO/PRIMER PAINT

*A latex based coating applied to surfaces coated with lead based paint (LBP) as a long-term preventative maintenance undercoating, prior to renovation or demolition. EcoBond LBP® Pre-Demo/Primer “encapsulates” old lead based paint protecting the environment and the worker, while chemically converting the lead, producing a non-hazardous undercoat.*

### Benefits

- Quick and Easy Application
- Passes TCLP Leachability Testing for Lead
- No Solvents, Non-flammable

### Uses

- Demolition (Commercial and Residential)
- Renovations/Remodeling
- Component Removal

### Applications

Wood Surfaces	Storage Tanks
Housing	Water Towers
Steel Structures	Asphalt
Concrete	

### Product Features

- Spreading Rate – 2,500 to 5,500 sq. ft./hr, up to 100 sq. ft. per gallon dependant on lead levels and application equipment
- Specific Gravity – 1.6
- V.O.C. – 1.8 lb/gallon
- Dry Time – 4 hours before recoating at 50° or above at 50% RH

### Product Application

**Surface Preparation:** No special surface preparation is needed. The coating is applied directly to the surface.

**Application:** Product is applied typically as a single coat averaging 15-20 mils. Additional coats may be applied if additional layers or higher lead levels are encountered. MT2 will conduct the initial testing to determine the leachability of the lead and the recommended application thickness. Note: Post application waste sampling per federal, state and local regulation is required prior to disposal.

**Equipment:** Can be applied by brush, rollers or airless, air assisted airless, industrial equipment such as Graco with a nominal tip size of .050.

**Thinning/Clean Up:** Thinning or reduction for this product is not required. Clean up with soap and water.

### Safety Precautions

- This product is non-flammable and contains no solvents.
- Provide standard painting type adequate ventilation and personal protection. Avoid contact with eyes and skin. Wash hands after use.

- This product does not contain petroleum distillates or hazardous material. No toxic chemicals(s) subject to the reporting requirements of section 313 of Title III and of CFR 372 are present.

Manufacturer warrants that the Products are free from defects in material and workmanship under normal use and proper storage. Manufacturer’s obligation under this warranty shall be limited to the replacement of any product that may be defective within one year from the date of shipment to the original purchaser, and which Manufacturer’s examination discloses to Manufacturer’s satisfaction to be defective or at the Manufacturer’s option, to refund Distributor in an amount equal to the purchase price paid by Distributor. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE, AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON MANUFACTURER’S PART, AND MANUFACTURER NEITHER ASSUMES, NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR MANUFACTURER, ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF THIS PRODUCT. THIS WARRANTY SHALL NOT APPLY TO PRODUCTS OR ANY PART THEREOF WHICH HAS BEEN SUBJECT TO FREEZING, EXCESSIVE HEAT, DILUTION, IMPROPER MIXING, IMPROPER STORAGE, OR IMPROPER APPLICATION.



For additional information, contact MT2, LLC. (Metals Treatment Technologies), 14045 W. 66<sup>th</sup> Ave., Arvada, CO 80004; 1-888-435-6645 (phone), 303-456-6998 (fax),

Email: [info@MT2.com](mailto:info@MT2.com), or [www.MT2.com](http://www.MT2.com)

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# Material Safety Data Sheet

## ECOBOND<sup>®</sup> LBP

### SECTION 1 – PRODUCT AND COMPANY ID

**Product Number:** ECOLBP1

**HMIS Codes:**

Health: 1  
Flammability: 0  
Reactivity: 0

**Manufacturers' Name:**

MT2  
14045 West 66<sup>th</sup> Avenue  
Arvada, CO 80004

**Emergency Phone Number:** (888)435-6645

**Product Name:** ECOBOND<sup>®</sup> LBP latex flat paint, white

**Information Phone Number:** (888)435-6645

**Date of Preparation:** 02/01/02

### SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

% BY WT	CAS NO.	INGREDIENT	UNITS
7	14808-60-7	<i>Quartz</i>	
		ACGIH TLV	0.05 mg/m3 as Resp. Dust
		OSHA PEL	0.1 mg/m3 as Resp. Dust
4	14464-46-1	<i>Cristobalite</i>	
		ACGIH TLV	0.05 mg/m3 as Resp. Dust
		OSHA PEL	0.05 mg/m3 as Resp. Dust
17	1332-58-7	<i>Kaolin</i>	
		ACGIH TLV	2 mg/m3 as Resp. Dust
		OSHA PEL	10 mg/m3 Total Dust
		OSHA PEL	5 mg/m3 Respirable Fraction
7	13463-67-7	<i>Titanium Dioxide</i>	
		ACGIH TLV	10 mg/m3 as Dust
		OSHA PEL	10 mg/m3 Total Dust
		OSHA PEL	5 mg/m3 Respirable Fraction

### SECTION 3 – HAZARDS IDENTIFICATION

**Routes of Exposure:** Exposure may be inhalation or and/or skin or eye contact, depending on conditions of use. To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.

**Effects of Overexposure:** Irritation of eyes, skin, and upper respiratory system. In a confined area vapors in high concentration may cause headache, nausea or dizziness.

**Signs and Symptoms of Overexposure:** Redness and itching or burning sensation may indicate eye or excessive skin exposure.

**Medical Conditions Aggravated by Exposure:** None generally recognized

**Cancer Information:** For complete discussion of toxicology data refer to Section 11.

### SECTION 4 – FIRST AID MEASURES

**If inhaled:** If affected, remove from exposure. Restore breathing. Keep warm and quiet.

**If on skin:** Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder for reuse.

**If in eyes:** Flush eyes with large amounts of water for 15 minutes. Get medical attention.

**If swallowed:** Do not induce vomiting. Get medical attention.



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## SECTION 5 – FIRE FIGHTING MEASURES

**Flash point:** LEL: N/A UEL: N/A

**Flammability Classification:** N/A

**Extinguishing Media:** Carbon Dioxide, Dry Chemical, Alcohol Foam

**Unusual Fire and Explosion Hazards:** Closed containers may explode (due to the build-up of pressure) when exposed to extreme heat.

**Special Fire Fighting Procedures:** Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build up and possible autoignition or explosion when exposed to extreme heat.

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## SECTION 6 – ACCIDENTAL RELEASE MEASURES

**Steps To Be Taken In Case Material is Released or Spilled:** Remove all sources of ignition. Ventilate and remove with inert absorbent.

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## SECTION 7 – HANDLING AND STORAGE

**Storage Category:** N/A

**Precautions To Be Taken In Handling and Storage:** Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of reach of children.

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## SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

**Precautions to be Taken in Use:** Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. This coating may contain materials classified as nuisance particulates (listed as “Dust” in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m<sup>3</sup> (total dust), 3 mg/m<sup>3</sup> (respirable fraction), OSHA PEL 15 mg/m<sup>3</sup> (total dust), 5 mg/m<sup>3</sup> respirable fraction.

**Ventilation:** Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

**Respiratory Protection:** If personal exposure cannot be controlled below applicable limits by ventilation, wear a properly fitted organic vapor/particulate respirator approved NIOSH/MSHA for protection against materials in Section 2. When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

**Protective Gloves:** Wear gloves which are recommended by glove supplier for protection against materials in Section 2.

**Eye Protection:** Wear safety spectacles with unperforated sideshields.

## SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Product Weight	11.50 lb/gal	1378 g/l
Specific Gravity	1.4	
Boiling Point	212-477° F	100-247° C
Melting Point	Not Available	
Volatile Volume	58%	
Evaporation Rate	Slower than ether	
Vapor Density	Heavier than air	
Solubility in Water	N/A	
pH	9.5	
Volatile Organic Compounds	(VOC Theoretical)	
0.70 lb/gal	95 g/l	Less Federally Exempt Solvents
0.36 lg/gal	43 g/l	Emitted VOC

## SECTION 10 – STABILITY AND REACTIVITY

**Stability:** Stable

**Hazardous Decomposition Products**

By fire: Carbon Dioxide, Carbon Monoxide

**Conditions to Avoid:** None known

**Hazardous Polymerization:** Will not occur

**Incompatibility:** None known

## SECTION 11 – TOXICOLOGICAL INFORMATION

**Chronic Health Hazards:** Crystalline Silica Quartz, Cristobalite is listed by IARC and NTP. Long term exposure to high levels of silica dust, which can occur only when sanding or abrading the dry film, may cause lung damage (silicosis) and possibly cancer. Ethylene Glycol is considered an animal teratogen. It has been shown to cause birth defects in rats and mice at high doses when given in drinking water or by gavage. There is no evidence to indicate it causes birth defects in humans. Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver and urinary systems. Rate exposed to titanium dioxide dust at 250 mg/m<sup>3</sup> developed lung cancer, however, such exposure levels are not attainable in the workplace.

### Toxicology Data

CAS No.	Ingredient Name			
107-21-1	<i>Ethylene Glycol</i>	LC50 RAT	4HR	Not Available
		LD50 RAT	4HR	4700 mg/kg
1317-95-9	<i>Tripoli (Quartz)</i>	LC50 RAT	4HR	Not Available
		LD50 RAT	4HR	Not Available
14807-96-6	Talc	LC50 RAT	4HR	Not Available
		LD50 RAT	4HR	Not Available
471-34-1	Calcium Carbonate	LC50 RAT	4HR	Not Available
		LD50 RAT	4HR	Not Available
13463-67-7	Titanium Dioxide	LC50 RAT	4HR	Not Available
		LD50 RAT	4HR	Not Available

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## SECTION 12 – ECOLOGICAL INFORMATION

**Ecological Information:** No Data Available

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## SECTION 13 – DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Waste from this product is not hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

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## SECTION 14 – TRANSPORT INFORMATION

No Data Available

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## SECTION 15 – REGULATORY INFORMATION

### SARA 313 (40 CFR 372.65C) Supplier Information

CAS No.	Chemical/Compound	% by Weight	% Element
107-21-1	Ethylene Glycol	2	---

### California Proposition 65

Warning: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

### TSCA Certification

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

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## SECTION 16 – OTHER INFORMATION

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

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