



# Material Safety Data Sheet

Revision Date: 21-Jan-2010

Revision Number: 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** IRONCLAD LATEX LOW LUSTRE METAL & WOOD ENAMEL  
**Product Code** 363  
**Product Class** WATER THINNED PAINT  
**Color** All

**Manufacturer** Benjamin Moore & Co.  
101 Paragon Drive  
Montvale, NJ 07645  
Phone: 201-573-9600  
www.benjaminmoore.com

**Emergency Telephone Number(s)**  
CHEMTREC: 800-424-9300

## 2. COMPOSITION INFORMATION ON COMPONENTS

### Hazardous Components

Chemical Name	CAS-No	Weight % (max)
Titanium dioxide	13463-67-7	20
Kaolin	1332-58-7	10
Ethylene glycol mono-2-ethylhexyl ether	1559-35-9	5
Ethylene glycol	107-21-1	5
Zinc phosphate	7779-90-0	5
Carbon black	1333-86-4	5
Diethylene glycol monomethyl ether	111-77-3	5
Sodium nitrite	7632-00-0	0.5

## 3. HAZARDS IDENTIFICATION

### Emergency Overview

Vapors may be irritating to eyes, nose, throat, and lungs. May cause skin irritation and/or dermatitis.

**Appearance** liquid

**Odor** little or no odor

### Potential Health Effects

**Principal Routes of Exposure** Eye contact, skin contact and inhalation.

### Acute Effects

**Eyes**

Contact with eyes may cause irritation.

<b>Skin</b>	May cause skin irritation and/or dermatitis. May be absorbed through the skin in harmful amounts.
<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Ingestion</b>	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Contains ethylene glycol which may cause birth defects.
<b>Chronic Effects</b>	Repeated contact may cause allergic reactions in very susceptible persons. Can be absorbed through skin. May cause liver damage. May cause kidney damage.

See Section 11 for additional Toxicological information.

**Aggravated Medical Conditions** None known

**HMIS**            **Health:** 2\*            **Flammability:** 1            **Reactivity:** 0            **PPE:** -

**HMIS Legend**

- 0 - Minimal Hazard
- 1 - Slight Hazard
- 2 - Moderate Hazard
- 3 - Serious Hazard
- 4 - Severe Hazard
- \* - Chronic Hazard
- X - Consult your supervisor or S.O.P. for "Special" handling instructions.

*Note: The PPE rating has intentionally been left blank. Choose appropriate PPE that will protect employees from the hazards the material will present under the actual normal conditions of use.*

*Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, Benjamin Moore & Co., has chosen to provide them. HMIS® ratings are to be used only in conjunction with a fully implemented HMIS® program by workers who have received appropriate HMIS® training. HMIS® is a registered trade and service mark of the NPCA. HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.*

**4. FIRST AID MEASURES**

<b>General Advice</b>	No hazards which require special first aid measures.
<b>Eye Contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
<b>Skin Contact</b>	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
<b>Inhalation</b>	Move to fresh air. If symptoms persist, call a physician.
<b>Ingestion</b>	Clean mouth with water and afterwards drink plenty of water. Consult a physician if necessary.
<b>Notes To Physician</b>	Treat symptomatically

**5. FIRE-FIGHTING MEASURES**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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<b>Protective Equipment And Precautions For Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>Specific Hazards Arising From The Chemical</b>	Closed containers may rupture if exposed to fire or extreme heat.
<b>Sensitivity To Mechanical Impact</b>	No
<b>Sensitivity To Static Discharge</b>	No
<b>Flash Point Data</b>	
Flash Point (°F)	250
Flash Point (°C)	121
Flash Point Method	PMCC
<b>Flammability Limits In Air</b>	
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available

**NFPA**      **Health:** 2      **Flammability:** 1      **Instability:** 0      **Special:** Not Applicable

**NFPA Legend**

- 0 - Not Hazardous
- 1 - Slightly
- 2 - Moderate
- 3 - High
- 4 - Severe

*The ratings assigned by Benjamin Moore & Co. are only suggested ratings, the contractor/employer has ultimate responsibilities for NFPA ratings where this system is used.*

*Additional information regarding the NFPA rating system is available from the National Fire Protection Agency (NFPA) at [www.nfpa.org](http://www.nfpa.org).*

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
<b>Environmental Precautions</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods For Clean-Up</b>	Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.
<b>Other Information</b>	None known

**7. HANDLING AND STORAGE**

<b>Handling</b>	Avoid contact with skin, eyes and clothing. Avoid breathing vapors, spray mists or sanding dust. In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Storage</b>	Keep container tightly closed. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Hazardous Components

Chemical Name	ACGIH	OSHA
Titanium dioxide	10 mg/m <sup>3</sup> - TWA	15 mg/m <sup>3</sup> - TWA total
Kaolin	2 mg/m <sup>3</sup> - TWA	15 mg/m <sup>3</sup> - TWA total 5 mg/m <sup>3</sup> - TWA
Ethylene glycol mono-2-ethylhexyl ether	N/E	N/E
Ethylene glycol	100 mg/m <sup>3</sup> - Ceiling	N/E
Zinc phosphate	N/E	N/E
Carbon black	3.5 mg/m <sup>3</sup> - TWA	3.5 mg/m <sup>3</sup> - TWA
Diethylene glycol monomethyl ether	N/E	N/E
Sodium nitrite	N/E	N/E

Legend

ACGIH - American Conference of Governmental Industrial Hygienists Exposure Limits  
 OSHA - Occupational Safety & Health Administration Exposure Limits  
 N/E - Not Established

Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment

Eye/Face Protection

Safety glasses with side-shields.

Skin Protection

Protective gloves and impervious clothing.

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment.

Hygiene Measures

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	liquid
Odor	little or no odor
Density (lbs/gal)	8.9 - 10.4
Specific Gravity	1.06 - 1.25
pH	Not available
Viscosity (centistokes)	Not available
Evaporation Rate	Not available
Vapor Pressure	Not available
Vapor Density	Not available
Wt. % Solids	40 - 60
Vol. % Solids	30 - 50
Wt. % Volatiles	40 - 60
Vol. % Volatiles	50 - 70
VOC Regulatory Limit (g/L)	< 250
Boiling Point (°F)	212
Boiling Point (°C)	100
Freezing Point (°F)	32

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Freezing Point (°C)	0
Flash Point (°F)	250
Flash Point (°C)	121
Flash Point Method	PMCC
Upper Explosion Limit	No data available
Lower Explosion Limit	No data available

## 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions To Avoid	Prevent from freezing
Incompatible Materials	No materials to be especially mentioned.
Hazardous Decomposition Products	None under normal use.
Possibility Of Hazardous Reactions	None under normal conditions of use.

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### **Product**

No information available

#### **Component**

##### Titanium dioxide

LD50 Oral: > 24000 mg/kg (Rat)

LD50 Dermal: > 10000 mg/m<sup>3</sup> (Rabbit)

LC50 Inhalation (Dust): > 6.82 mg/L (Rat, 4 hr.)

##### Kaolin

LD50 Oral: > 5000 mg/kg (Rat)

##### Ethylene glycol

LD50 Oral: 4700 mg/kg (Rat)

LD50 Dermal: 9530 µg/L (Rabbit)

##### Carbon black

LD50 Oral: > 15400 mg/kg (Rat)

LD50 Dermal: > 3000 mg/kg (Rabbit)

##### Diethylene glycol monomethyl ether

LD50 Oral: 7,190 mg/kg (Rat)

LD50 Dermal: 2,500 µL/kg (Rabbit)

Sodium nitrite

LD50 Oral: 180 mg/kg (Rat)

LC50 Inhalation (Dust): 5.5 mg/m<sup>3</sup> (Rat, 4 hr.)

**Chronic Toxicity**

**Carcinogenicity**

The information below indicates whether each agency has listed any ingredient as a carcinogen:

Chemical Name	ACGIH	IARC	NTP	OSHA Carcinogen
Titanium dioxide		2B - Possible Human Carcinogen		Listed
Carbon black		2B - Possible Human Carcinogen		Listed
Sodium nitrite		2A - Probable Human Carcinogen		

- Although IARC has classified titanium dioxide as possibly carcinogenic to humans (2B), their summary concludes: "No significant exposure to titanium dioxide is thought to occur during the use of products in which titanium dioxide is bound to other materials, such as paint."

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - Occupational Safety & Health Administration

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity Effects**

**Product**

**Acute Toxicity to Fish**

No information available

**Acute Toxicity to Aquatic Invertebrates**

No information available

**Acute Toxicity to Aquatic Plants**

No information available

**Component**

**Acute Toxicity to Fish**

## 12. ECOLOGICAL INFORMATION

### Titanium dioxide

LC50: >1000 mg/L (Fathead Minnow - 96 hr.)

### Ethylene glycol

LC50: 8050 mg/L (Fathead Minnow - 96 hr.)

### Acute Toxicity to Aquatic Invertebrates

No information available

### Acute Toxicity to Aquatic Plants

No information available

## 13. DISPOSAL CONSIDERATIONS

### **Waste Disposal Method**

Dispose of in accordance with federal, state, and local regulations. Dry, empty containers may be recycled in a can recycling program. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated

**ICAO / IATA** Not regulated

**IMDG / IMO** Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

**United States TSCA** Yes - All components are listed or exempt.  
**Canada DSL** No - Not all of the components are listed.

### Federal Regulations

#### SARA 311/312 hazardous categorization

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

<u>Chemical Name</u>	<u>CAS-No</u>	<u>Weight % (max)</u>
Ethylene glycol	107-21-1	5
Sodium nitrite	7632-00-0	0.5

*This product may contain trace amounts of (other) SARA reportable chemicals. Contact Benjamin Moore & Co. for further information.*

**Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)**

This product contains the following HAPs:

<u>Chemical Name</u>	<u>CAS-No</u>	<u>Weight % (max)</u>
Ethylene glycol	107-21-1	5
Diethylene glycol monomethyl ether	111-77-3	5

*This product may contain trace amounts of (other) HAPs chemicals. Contact Benjamin Moore & Co. for further information.*

**State Regulations**

**California Proposition 65**

*This product may contain small amounts of materials known to the state of California to cause cancer or reproductive harm.*

**State Right-to-Know**

<u>Chemical Name</u>	<u>Massachusetts</u>	<u>New Jersey</u>	<u>Pennsylvania</u>	<u>Louisiana</u>	<u>Rhode Island</u>
Titanium dioxide	X	X	X		X
Kaolin	X	X	X		X
Ethylene glycol	X	X	X		X
Carbon black	X	X	X		X
Diethylene glycol monomethyl ether	X		X		
Sodium nitrite	X	X	X		

**Legend**

X - Listed

16. OTHER INFORMATION



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**WARNING!** If you scrape, sand, or remove old paint, you may release lead dust. LEAD IS TOXIC. EXPOSURE TO LEAD DUST CAN CAUSE SERIOUS ILLNESS, SUCH AS BRAIN DAMAGE, ESPECIALLY IN CHILDREN. PREGNANT WOMEN SHOULD ALSO AVOID EXPOSURE. Wear a NIOSH approved respirator to control lead exposure. Clean up carefully with a HEPA vacuum and a wet mop. Before you start, find out how to protect yourself and your family by contacting the National Lead Information Hotline at 1-800-424-LEAD or log on to [www.epa.gov/lead](http://www.epa.gov/lead).

**Prepared By** Product Stewardship Department  
Benjamin Moore & Co.  
360 Route 206 - P.O. Box 4000  
Flanders, NJ 07836  
866-690-1961

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Disclaimer

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**End of MSDS**