



# SAFETY DATA SHEET

Revision Date: 17-Aug-2018

Revision Number: 2

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** IRONCLAD SUPER SATIN FINISH ENAMEL MEDIUM BASE  
**Product Code** 2272B  
**Alternate Product Code** 2272B  
**Product Class** SOLVENT THINNED PAINT  
**Color** All  
**Recommended use** Paint  
**Restrictions on use** No information available

**Manufacturer**  
Benjamin Moore & Co.  
101 Paragon Drive  
Montvale, NJ 07645  
Phone: 1-866-708-9180  
www.benjaminmoore.com

**Emergency Telephone**  
CHEMTREC (US): 800-424-9300  
CHEMTREC (outside US): (703)-527-3887

## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|                     |             |
|---------------------|-------------|
| Skin sensitization  | Category 1  |
| Carcinogenicity     | Category 1A |
| Aspiration toxicity | Category 1  |
| Flammable liquids   | Category 3  |

### Label elements

#### **Danger**

#### **Hazard statements**

May cause an allergic skin reaction  
May cause cancer  
May be fatal if swallowed and enters airways  
Flammable liquid and vapor



**Appearance** liquid

**Odor** solvent

**Precautionary Statements - Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Contaminated work clothing should not be allowed out of the workplace  
Wear protective gloves  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep container tightly closed  
Ground/bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting/equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention

**Skin**

If skin irritation or rash occurs: Get medical advice/attention  
Wash contaminated clothing before reuse  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
Do NOT induce vomiting

**Fire**

In case of fire: Use CO2, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store locked up  
Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Rags, steel wool or waste soaked with this product may spontaneously catch fire if improperly discarded

**Other information**

No information available

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Chemical name                         | CAS No.    | Weight-% |
|---------------------------------------|------------|----------|
| Hydrotreated heavy naphtha, petroleum | 64742-48-9 | 30       |
| Limestone                             | 1317-65-3  | 25       |
| Titanium dioxide                      | 13463-67-7 | 15       |
| Ethyl benzene                         | 100-41-4   | 0.5      |
| Methyl ethyl ketoxime                 | 96-29-7    | 0.5      |
| Silica, crystalline                   | 14808-60-7 | 0.5      |
| Cobalt bis(2-ethylhexanoate)          | 136-52-7   | 0.5      |

#### 4. FIRST AID MEASURES

|  |   |
|--|---|
| <b>General Advice</b>                  | If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.   |
| <b>Eye Contact</b>                     | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.             |
| <b>Skin Contact</b>                    | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. Wash clothing before reuse. Destroy contaminated articles such as shoes. |
| <b>Inhalation</b>                      | Move to fresh air. If symptoms persist, call a physician. If not breathing, give artificial respiration. Call a physician immediately.  |
| <b>Ingestion</b>                       | Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician.                                       |
| <b>Protection Of First-Aiders</b>      | Use personal protective equipment.  |
| <b>Most Important Symptoms/Effects</b> | May cause allergic skin reaction.   |
| <b>Notes To Physician</b>              | Treat symptomatically.  |

#### 5. FIRE-FIGHTING MEASURES

|  |  |
|--|--|
| <b>Suitable Extinguishing Media</b>                          | Foam, dry powder or water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.   |
| <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>            | Combustible material. Closed containers may rupture if exposed to fire or extreme heat. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors. |
| <b>Sensitivity To Mechanical Impact</b>                      | No   |

|  |      |
|--|------|
| <b>Sensitivity To Static Discharge</b> | Yes  |
| <b>Flash Point Data</b>                |      |
| Flash Point (°F)                       | 119  |
| Flash Point (°C)                       | 48   |
| Method                                 | PMCC |

**Flammability Limits In Air**

|                                  |               |
|----------------------------------|---------------|
| <b>Lower flammability limit:</b> | Not available |
| <b>Upper flammability limit:</b> | Not available |

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

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

*The ratings assigned 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>      | Use personal protective equipment. Remove all sources of ignition.  |
| <b>Other Information</b>         | Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained. |
| <b>Environmental precautions</b> | See Section 12 for additional Ecological Information.   |
| <b>Methods for Cleaning Up</b>   | Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.  |

**7. HANDLING AND STORAGE**

|                 |   |
|-----------------|---|
| <b>Handling</b> | Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. Wear personal protective equipment. Take precautionary measures against static discharges. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Storage</b>  | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep away from open flames, hot surfaces and sources of ignition. Keep in properly labeled containers. Keep out of the reach of children.   |

**DANGER** - Rags, steel wool or waste soaked with this product may

spontaneously catch fire if improperly discarded. Immediately after use, place rags, steel wool or waste in a sealed water-filled metal container.

**Incompatible Materials** Incompatible with strong acids and bases and strong oxidizing agents.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Exposure Limits

| Chemical name       | ACGIH TLV                     | OSHA PEL  |
|---------------------|-------------------------------|---|
| Limestone           | N/E                           | 15 mg/m <sup>3</sup> - TWA<br>5 mg/m <sup>3</sup> - TWA |
| Titanium dioxide    | 10 mg/m <sup>3</sup> - TWA    | 15 mg/m <sup>3</sup> - TWA                              |
| Ethyl benzene       | 20 ppm - TWA                  | 100 ppm - TWA<br>435 mg/m <sup>3</sup> - TWA            |
| Silica, crystalline | 0.025 mg/m <sup>3</sup> - TWA | -   |

### 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**

Long sleeved clothing. Protective gloves.

**Respiratory Protection**

In operations where exposure limits are exceeded, use a NIOSH approved respirator that has been selected by a technically qualified person for the specific work conditions. When spraying the product or applying in confined areas, wear a NIOSH approved respirator specified for paint spray or organic vapors.

### Hygiene Measures

Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Wash thoroughly after handling. When using do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|                                    |                          |
|------------------------------------|--------------------------|
| <b>Appearance</b>                  | liquid                   |
| <b>Odor</b>                        | solvent                  |
| <b>Odor Threshold</b>              | No information available |
| <b>Density (lbs/gal)</b>           | 10.05 - 10.15            |
| <b>Specific Gravity</b>            | 1.20 - 1.22              |
| <b>pH</b>                          | No information available |
| <b>Viscosity (cps)</b>             | No information available |
| <b>Solubility(ies)</b>             | No information available |
| <b>Water solubility</b>            | No information available |
| <b>Evaporation Rate</b>            | No information available |
| <b>Vapor pressure @20 °C (kPa)</b> | No information available |
| <b>Vapor density</b>               | No information available |
| <b>Wt. % Solids</b>                | 65 - 75                  |
| <b>Vol. % Solids</b>               | 45 - 55                  |

|                                |                          |
|--------------------------------|--------------------------|
| Wt. % Volatiles                | 25 - 35                  |
| Vol. % Volatiles               | 45 - 55                  |
| VOC Regulatory Limit (g/L)     | <400                     |
| Boiling Point (°F)             | 279                      |
| Boiling Point (°C)             | 137                      |
| Freezing Point (°F)            | No information available |
| Freezing Point (°C)            | No information available |
| Flash Point (°F)               | 119                      |
| Flash Point (°C)               | 48                       |
| Method                         | PMCC                     |
| Flammability (solid, gas)      | Not applicable           |
| Upper flammability limit:      | No information available |
| Lower flammability limit:      | No information available |
| Autoignition Temperature (°F)  | No information available |
| Autoignition Temperature (°C)  | No information available |
| Decomposition Temperature (°F) | No information available |
| Decomposition Temperature (°C) | No information available |
| Partition coefficient          | No information available |

## 10. STABILITY AND REACTIVITY

|                                    |   |
|------------------------------------|---|
| Reactivity                         | Not Applicable  |
| Chemical Stability                 | Stable under normal conditions. Hazardous polymerisation does not occur.              |
| Conditions to avoid                | Keep away from open flames, hot surfaces, static electricity and sources of ignition. |
| Incompatible Materials             | Incompatible with strong acids and bases and strong oxidizing agents.                 |
| Hazardous Decomposition Products   | Thermal decomposition can lead to release of irritating gases and vapors.             |
| Possibility of hazardous reactions | None under normal conditions of use.  |

## 11. TOXICOLOGICAL INFORMATION

### Product Information

### Information on likely routes of exposure

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

### Acute Toxicity

**Product Information** Repeated or prolonged exposure to organic solvents may lead to permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling vapors may be harmful or fatal.

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

|                                 |  |
|---------------------------------|--|
| <b>Eye contact</b>              | Contact with eyes may cause irritation.  |
| <b>Skin contact</b>             | May cause skin irritation and/or dermatitis. Prolonged skin contact may defat the skin and produce dermatitis.   |
| <b>Ingestion</b>                | Ingestion may cause irritation to mucous membranes. Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death. |
| <b>Inhalation</b>               | High vapor / aerosol concentrations are irritating to the eyes, nose, throat and lungs and may cause headaches, dizziness, drowsiness, unconsciousness, and other central nervous system effects.                              |
| <b>Sensitization</b>            | May cause an allergic skin reaction.   |
| <b>Neurological Effects</b>     | No information available.  |
| <b>Mutagenic Effects</b>        | No information available.  |
| <b>Reproductive Effects</b>     | No information available.  |
| <b>Developmental Effects</b>    | No information available.  |
| <b>Target organ effects</b>     | No information available.  |
| <b>STOT - repeated exposure</b> | Causes damage to organs through prolonged or repeated exposure if inhaled.   |
| <b>STOT - single exposure</b>   | No information available.  |
| <b>Other adverse effects</b>    | No information available.  |
| <b>Aspiration Hazard</b>        | May be harmful if swallowed and enters airways. Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.     |

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

|                        |             |
|------------------------|-------------|
| <b>ATEmix (oral)</b>   | 13805 mg/kg |
| <b>ATEmix (dermal)</b> | 10616 mg/kg |

**Component Information**

**Acute Toxicity**

Hydrotreated heavy naphtha, petroleum  
LD50 Oral: > 5,000 mg/kg (Rat) vendor data  
LD50 Dermal: > 3,160 mg/kg (Rabbit)

Titanium dioxide  
LD50 Oral: > 10000 mg/kg (Rat)

Ethyl benzene  
LD50 Oral: mg/kg (Rat)  
LD50 Dermal: > mg/kg (Rabbit)  
LC50 Inhalation (Vapor): mg/m<sup>3</sup> (Rat, 2 hr.)

Methyl ethyl ketoxime  
LD50 Oral: 930 mg/kg (Rat)  
LD50 Dermal: 200 µL/kg (Rabbit)  
LC50 Inhalation (Vapor): > 4.8 mg/L (Rat)

Silica, crystalline  
LD50 Oral: 500 mg/kg (Rat)

**Carcinogenicity**

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

| Chemical name                | IARC                           | NTP                    | OSHA   |
|------------------------------|--------------------------------|------------------------|--------|
| Titanium dioxide             | 2B - Possible Human Carcinogen |                        | Listed |
| Ethyl benzene                | 2B - Possible Human Carcinogen |                        | Listed |
| Silica, crystalline          | 1 - Human Carcinogen           | Known Human Carcinogen | Listed |
| Cobalt bis(2-ethylhexanoate) | 2B - Possible Human Carcinogen |                        | Listed |

- Crystalline Silica has been determined to be carcinogenic to humans by IARC (1) when in respirable form. Risk of cancer depends on duration and level of inhalation exposure to spray mist or dust from sanding the dried paint.
- 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."
- Cobalt and cobalt compounds are listed as possible human carcinogens by IARC (2B). However, there is inadequate evidence of the carcinogenicity of cobalt and cobalt compounds in humans.

**Legend**

IARC - International Agency for Research on Cancer

NTP - National Toxicity Program

OSHA - Occupational Safety & Health Administration

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity Effects**

The environmental impact of this product has not been fully investigated.

**Product Information**

**Acute Toxicity to Fish**

No information available

**Acute Toxicity to Aquatic Invertebrates**

No information available

**Acute Toxicity to Aquatic Plants**

No information available

**Persistence / Degradability**

No information available.

**Bioaccumulation**

No information available.

**Mobility in Environmental Media**

No information available.

**Ozone**

No information available



## **Component Information**

### **Acute Toxicity to Fish**

Titanium dioxide

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

Ethyl benzene

LC50: 12.1 mg/L (Fathead Minnow - 96 hr.)

Methyl ethyl ketoxime

LC50: 48 mg/L (Bluegill sunfish - 96 hr.)

### **Acute Toxicity to Aquatic Invertebrates**

Ethyl benzene

EC50: 1.8 mg/L (Daphnia magna - 48 hr.)

Methyl ethyl ketoxime

EC50: 750 mg/L (Daphnia magna - 48 hr.)

### **Acute Toxicity to Aquatic Plants**

Ethyl benzene

EC50: 4.6 mg/L (Green algae (Scenedesmus subspicatus), 72 hrs.)

## **13. DISPOSAL CONSIDERATIONS**

### **Waste Disposal Method**

Dispose of in accordance with federal, state, and local regulations. Local requirements may vary, consult your sanitation department or state-designated environmental protection agency for more disposal options.

### **Empty Container Warning**

Emptied containers may retain product residue. Follow label warnings even after container is emptied. Residual vapors may explode on ignition.

## **14. TRANSPORT INFORMATION**

### **DOT**

|                             |   |
|-----------------------------|---|
| <b>Proper Shipping Name</b> | PAINT   |
| <b>Hazard class</b>         | 3   |
| <b>UN-No.</b>               | UN1263  |
| <b>Packing Group</b>        | III   |
| <b>Description</b>          | UN1263, PAINT, 3, III, Marine Pollutant (Hydrotreated heavy naphtha, petroleum) |

In the US this material may be reclassified as a Combustible Liquid and is not regulated in containers of less than 119 gallons (450 liters) via surface transportation (refer to 49CFR173.120(b)(2) for further information).

### **ICAO / IATA**

Contact the preparer for further information.

### **IMDG / IMO**

Contact the preparer for further information.

**15. REGULATORY INFORMATION**

**International Inventories**

**TSCA: United States**                      Yes - All components are listed or exempt.  
**DSL: Canada**                                Yes - All components are listed or exempt.

**Federal Regulations**

**SARA 311/312 hazardous categorization**

|                                   |     |
|-----------------------------------|-----|
| Acute health hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire hazard                       | Yes |
| 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-%</u> | <u>CERCLA/SARA 313<br/>(de minimis concentration)</u> |
|----------------------|----------------|-----------------|---|
| Ethyl benzene        | 100-41-4       | 0.5             | 0.1   |

**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-%</u> | <u>Hazardous Air Pollutant<br/>(HAP)</u> |
|----------------------|----------------|-----------------|--|
| Ethyl benzene        | 100-41-4       | 0.5             | Listed                                   |

**US State Regulations**

**California Proposition 65**



**WARNING:** Cancer and Reproductive Harm– [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)

**State Right-to-Know**

| <b>Chemical name</b> | <b>Massachusetts</b> | <b>New Jersey</b> | <b>Pennsylvania</b> |
|----------------------|----------------------|-------------------|---------------------|
| Limestone            | X                    | X                 | X                   |
| Titanium dioxide     | X                    | X                 | X                   |
| Silica, crystalline  | X                    | X                 | X                   |

**Legend**

X - Listed

