1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: IRONCLAD SUPER SATIN FINISH ENAMEL DEEP BASE
Product Code: 2273B
Alternate Product Code: 2273B
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)

<table>
<thead>
<tr>
<th>Skin sensitization</th>
<th>Category 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinogenicity</td>
<td>Category 1A</td>
</tr>
<tr>
<td>Aspiration toxicity</td>
<td>Category 1</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

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

_____________________________________________________________________________________________
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
4. FIRST AID MEASURES

General Advice
If symptoms persist, call a physician. Show this safety data sheet to the doctor in attendance.

Eye Contact
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.

Skin Contact
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.

Inhalation
Move to fresh air. If symptoms persist, call a physician.
If not breathing, give artificial respiration. Call a physician immediately.

Ingestion
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.

Protection Of First-Aiders
Use personal protective equipment.

Most Important Symptoms/Effects
May cause allergic skin reaction.

Notes To Physician
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Foam, dry powder or water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Protective Equipment And Precautions For Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific Hazards Arising From The Chemical
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.

Sensitivity To Mechanical Impact
No
Sensitivity To Static Discharge: Yes

Flash Point Data
- Flash Point (°F): 119
- Flash Point (°C): 48
- Method: PMCC

Flammability Limits In Air
- Lower flammability limit: Not available
- Upper flammability limit: 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.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
- Use personal protective equipment. Remove all sources of ignition.

Other Information
- 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 spills cannot be contained.

Environmental precautions
- See Section 12 for additional Ecological Information.

Methods for Cleaning Up
- Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Handling
- 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.

Storage

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.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>N/E</td>
<td>15 mg/m³ - TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 mg/m³ - TWA</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>10 mg/m³ - TWA</td>
<td>15 mg/m³ - TWA</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>20 ppm - TWA</td>
<td>100 ppm - TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>435 mg/m³ - TWA</td>
</tr>
<tr>
<td>Silica, crystalline</td>
<td>0.025 mg/m³ - TWA</td>
<td>-</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>solvent</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>Density (lbs/gal)</td>
<td>9.85 - 9.95</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.18 - 1.20</td>
</tr>
<tr>
<td>pH</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity (cps)</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No information available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor pressure @20 °C (kPa)</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor density</td>
<td>No information available</td>
</tr>
<tr>
<td>Wt. % Solids</td>
<td>65 - 75</td>
</tr>
<tr>
<td>Vol. % Solids</td>
<td>45 - 55</td>
</tr>
</tbody>
</table>
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

Eye contact
Contact with eyes may cause irritation.

Skin contact
May cause skin irritation and/or dermatitis. Prolonged skin contact may defat the skin and produce dermatitis.

Ingestion
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.

Inhalation
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.

Sensitization
May cause an allergic skin reaction.

Neurological Effects
No information available.

Mutagenic Effects
No information available.

Reproductive Effects
No information available.

Developmental Effects
No information available.

Target organ effects
No information available.

STOT - repeated exposure
Causes damage to organs through prolonged or repeated exposure if inhaled.

STOT - single exposure
No information available.

Other adverse effects
No information available.

Aspiration Hazard
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

<table>
<thead>
<tr>
<th>Component Information</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATEmix (oral)</td>
<td>15379 mg/kg</td>
</tr>
<tr>
<td>ATEmix (dermal)</td>
<td>10558 mg/kg</td>
</tr>
</tbody>
</table>

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/m³ (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:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide</td>
<td>2B - Possible Human Carcinogen</td>
<td></td>
<td>Listed</td>
</tr>
<tr>
<td>Ethyl benzene</td>
<td>2B - Possible Human Carcinogen</td>
<td></td>
<td>Listed</td>
</tr>
<tr>
<td>Cobalt bis(2-ethylhexanoate)</td>
<td>2B - Possible Human Carcinogen</td>
<td></td>
<td>Listed</td>
</tr>
<tr>
<td>Silica, crystalline</td>
<td>1 - Human Carcinogen</td>
<td>Known Human Carcinogen</td>
<td>Listed</td>
</tr>
</tbody>
</table>

• 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
Proper Shipping Name: PAINT
Hazard class: 3
UN-No.: UN1263
Packing Group: III
Description: 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 49 CFR 173.120(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

<table>
<thead>
<tr>
<th>Hazard Type</th>
<th>Yes/No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute health hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Chronic Health Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

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:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>CERCLA/SARA 313 (de minimis concentration)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl benzene</td>
<td>100-41-4</td>
<td>0.5</td>
<td>0.1</td>
</tr>
</tbody>
</table>

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

This product contains the following HAPs:

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Hazardous Air Pollutant (HAP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl benzene</td>
<td>100-41-4</td>
<td>0.5</td>
<td>Listed</td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65

⚠️ WARNING: Cancer and Reproductive Harm– www.P65warnings.ca.gov

State Right-to-Know

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Silica, crystalline</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend

X - Listed
16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health: 1*</th>
<th>Flammability: 2</th>
<th>Reactivity: 0</th>
<th>PPE: -</th>
</tr>
</thead>
</table>

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, the preparer, 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.

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.

Prepared By
Product Stewardship Department
Benjamin Moore & Co.
101 Paragon Drive
Montvale, NJ 07645
800-225-5554

Revision Date: 17-Aug-2018
Revision Summary: Not available

Disclaimer
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END OF SAFETY DATA SHEET