

MATERIAL SAFETY DATA SHEET

This Material Safety Data Sheet meets or exceeds the requirements of the Canadian Controlled Product Regulations (WHMIS)

1. Product and Supplier Identification

Product: Iron Shield

Product Use: Iron stain preventer

Supplier: Canadian Building Restoration Products, Inc.,
#102 – 876 Cordova Diversion,
Vancouver, BC V6A 3R3
Emergency Telephone: (604) 254-3325

2. Composition

| Component | % (w/w) | Exposure Limits |
|--|---------|---|
| Bis(Hexamethylene)Triaminopenta(methylene phosphonic acid) CAS 34690-00-1 | 7-13 | N/Av |
| Phosphoric Acid CAS 7664-38-2 | 15-40 | 4400 mg/kg (Oral Rat, 5% aqueous solution) LD ₅₀ 25.5 mg/M ³ (mouse, not specified) LC ₅₀ |
| Hydrochloric Acid CAS 7647-01-0 | 0.5-1.5 | 900 mg/kg (Oral, Rabbit) LD ₅₀ 3100 mg/M ³ (mouse, 30 min., mist) LC ₅₀ |

3. Hazards Identification

This product is corrosive. May be fatal if inhaled or swallowed in significant amounts. Exercise due care in accordance with good industrial hygiene practice. Avoid contact with amphoteric metals such as aluminum. Contact with amphoteric metals will form flammable hydrogen gas.

4. First Aid Measures

Eye Contact: Hold eyelids open and flush with a steady, gentle stream of water for at least 15-20. Immediately obtain medical assistance.

Skin Contact: Avoid direct contact with this product. Wear Personal Protective Equipment. Flush contaminated area with lukewarm, running water for at least 20-30 minutes. If irritation persists, keep flushing, and obtain medical attention.

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

Ingestion: Call a physician or poison control center. Rinse mouth with water. Obtain medical attention immediately. Do NOT induce vomiting.

5. Fire Fighting Measures

Flash point: Not applicable
Autoignition temperature: Not applicable.
Lower Explosive Limit: Not applicable
Upper Explosion Limit: Not applicable
Sensitivity to Impact: Not sensitive.
Sensitivity to Static Discharge: Not sensitive.

Hazardous Combustion Products: May contain phosphine, oxides of carbon and nitrogen. Contact with amphoteric metals such as aluminum may produce flammable hydrogen gas.

Extinguishing Media: As required for surrounding fire.

Fire Fighting Instructions: Wear full protective equipment and self-contained breathing apparatus. If container is breached, prevent liquid from contacting amphoteric metals such as aluminum. Contact with aluminum will form flammable hydrogen gas.

6. Accidental Release Measures

Personal Protection: Wear appropriate protective equipment. Dike area to prevent spreading. Collect for removal.

Environmental Precautions: Do not flush to sewer. Dike or contain. Absorb onto inert medium, package and label for legal disposal.

Cleanup Procedures:

7. Handling and Storage

Handling Procedures: Handle in accordance with good industrial hygiene practice. Avoid contact with metals. Avoid contact with eyes, skin and clothing. Wash thoroughly when handling. Avoid breathing vapour or mist.

Storage: Store in closed containers in a cool, well ventilated location place under cover. Do not mix with incompatible materials. Keep well away from fire, sparks, flame, and other ignition sources. Keep from freezing. Maintain above 5°C.

8. Exposure Controls, Personal Protection

Engineering Controls: Local exhaust in all areas where dusty or misty conditions prevail. Avoid breathing mists. If general ventilation or local exhaust is inadequate persons exposed to mists should wear approved breathing devices.

Respiratory Protection: As required to prevent the inhalation of mists or aerosols. Use only approved respiratory equipment.

Skin Protection: As required to prevent skin contact. Wear rubber or neoprene gloves.

Eye and Face Protection: Chemical goggles, safety glass or face shield.

Footwear: Wear acid resistant clothing and footwear as to prevent skin contact.

Other: Maintain an Eye Bath and Safety Shower in an easily accessible location to where the product is stored and used.

9. Physical and Chemical Properties

| | | | |
|-------------------------|--------------------------------|-------------------------------|---------------------|
| Appearance: | Clear, amber liquid | Melting Point | <0°C |
| Odour: | Faint amine | Boiling Point: | >100°C |
| Odour Threshold: | Not determined | Critical Temperature: | N/Av. |
| pH: | <2(1%v/v) | Relative Density: | 1.23 (water = 1) |
| Vapour Pressure: | <17 mm Hg | Partition Coefficient: | N/Av |
| Solubility: | Completely soluble in water | Evaporation Rate: | Slow |
| Vapour Density: | N/Av | | |

10. Stability and Reactivity

Chemical Stability and Reactivity: Product is stable.

Incompatibility: Avoid contact with bases, amphoteric metal (eg. Aluminum).

Hazardous Decomposition Products: Hydrogen gas formed on contact with aluminum.
Thermal decomposition products are toxic.

Hazardous Polymerization: Not expected.

11. Toxicological Information

Acute Exposure: Corrosive to eyes and skin. Corrosive to mouth and throat if ingested. Aerosols and mists corrosive to respiratory tract.

| | |
|-------------------------------|---|
| Chronic Exposure: | N/Av |
| Exposure Limits: | 1 mg/m ³ ceiling (ACGIH) Phosphoric acid |
| Irritancy: | Yes |
| Sensitization: | N/Av |
| Carcinogenicity: | N/Av |
| Teratogenicity: | N/Av |
| Reproductive toxicity: | N/Av |
| Mutagenicity: | N/Av |
| Synergistic products: | N/Av |

12. Ecological Information

Environmental toxicity: N/Av.

Biodegradability: N/Av

13. Disposal Considerations

Canadian Environmental Protection Act: Dispose according to all local, provincial and federal requirements.

14. Transport Information

Canadian Transportation of Dangerous Goods Regulations: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(Phosphoric Acid, Hydrochloric Acid), Class 8, UN 3264, P.G.III

US DOT Hazardous Materials Regulations: Corrosive Liquid, acidic, inorganic, N.O.S. (Phosphoric Acid, Hydrochloric Acid) Class 8, UN 3264, PGIII

15. Regulatory Information

Canadian Federal Regulations:

WHMIS Classification: E – Corrosive

This product has been classified under the CPR and the MSDS disclose information elements required by the CPR.

United States Federal Regulations:

HMIS: Health 3, Flammability 0, Reactivity 2, Personal Protective Equipment X

16. Other Information

Preparation Date: February 23, 2002

Prepared by: Canadian Building Restoration Products, Inc.

Comments: This Material Safety Data Sheet was prepared using information provided by Diacon Technologies Ltd.

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Note: Every effort is made to ensure that the data presented herein are current and factual; however, no warranty nor any other legal responsibility is to be construed from this document. Numerical data represent nominal and/or typical properties and do not constitute specifications. Any use of the information presented herein must be determined by the user to be in accordance with applicable Federal, Provincial and local laws and regulations.