CCI
COLUMBUS CHEMICAL INDUSTRIES INC.
P.O. BOX 8
COLUMBUS, WISCONSIN 53925-0008
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FAX (920) 623-2577

Material Safety Data Sheet

May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910 1200. Standard must be consulted for specific requirements

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072

IDENTITY *(as Used on Label and List)*

P-B Stock solution (Fiske-Subbarrow Reducing agent)

Note: *Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.*

Section I

Manufacturers /Distributor Address Number Street City State and Zip Code

Columbus Chemical Industries, Inc.
N4335 Temkin Road
Columbus, WI 53925-0008

Emergency Telephone Number
CHEMTREC 1-800-424-9300

Telephone Number for Information
920-623-2140

Date Prepared
09-05-2006

Signature of Preparer (optional)

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s)	CAS #	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Hydrochloric acid*,**	7647-01-0	5 ppm ceiling	2 ppm ceiling	Not available	25-27%
Boric Acid	10043-35-3	Not available	Not available	Not available	3-5%
Ammonium Molybdate	12054-85-2	Not available	Not available	Not available	2-4%

*SYNONYMS: Muriatic Acid.

**Subject to SARA Section 313 Reporting Requirements.

Section III - Physical/Chemical Characteristics

Boiling Point	Not available	Specific Gravity (H_2O = 1)	1.160
Vapor Pressure (mm Hg)	Not available	Melting Point	Not available
Vapor Density (AIR = 1)	Not available	Evaporation Rate (Butyl Acetate = 1)	Not available

Solubility in Water
Complete.

Appearance and Odor
Clear, yellow/green liquid

Section IV Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Nonflammable		Not applicable	Not applicable

Extinguishing Media
Use extinguishing media appropriate for surrounding fire.

Special Fire Fighting Procedures
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece respirator operated in positive pressure mode.

Unusual Fire and Explosion Hazards
Contact with reactive metals may result in the generation of flammable hydrogen gas which is flammable and explosive in air.

Section V Reactivity Data

Stability	Unstable			Conditions to Avoid	HEAT, light, air / oxygen,
	Stable	X			incompatible materials.

Incompatibility Materials to Avoid

Alkalis, amines, metals, oxidizing agents, organic materials. Light sensitive.

Hazardous Decomposition or Byproducts

Will yield Hydrogen gas from contact with most metals.

Hazardous Polymerization			Conditions to Avoid
	May Occur		Not available
	Will Not Occur	X	

Section VI Health Hazard Data

Routes of Entry	Inhalation ?	Skin ?	Ingestion ?
	Yes	Yes	Yes

Health Hazards *(Acute and Chronic)*

SKIN / EYES: Causes severe burns and irritation. INHALATION: Extremely destructive to mucous membranes and upper respiratory tract. May cause chemical pneumonitis, pulmonary edema and laryngitis. May affect the sense organs, liver circulatory system, teeth and developing fetus. INGESTION: Toxic. May be fatal, cause burns to gastrointestinal tract.

Carcinogenicity	NTP	IARC Monographs	OSHA REGULATED?
	Not Listed	Not Listed	Not Listed

Signs and Symtoms of Exposure.

INHALATION: Chest pain, difficulty breathing, coughing, wheezing. SKIN: Burns, itching, scaling, reddening, blistering. EYES: Redness, swelling, pain, itchiness, dryness, burns, conjunctivitis. INGESTION: Nausea, vomiting, stomach pain.

Medical Conditions Generally Aggravated by Exposure Expected to aggravate asthma, emphysema, other respiratory diseases.

Emergency and First Aid Procedures INGESTION: If swallowed, wash out mouth with water provided person is conscious, do not induce vomiting. Get medical attention. EYES: In case of contact, immediately flush with large amounts of water for at least 15 minutes. Call a physician. INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial If breathing is difficult, give oxygen. Call physician. SKIN: Immediately wash skin with soap and large amounts of water.

Section VII Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled Evacuate unprotected personnel from area. Maintain effective ventilation. Wear NIOSH approved respirator, chemical-resistant goggles, rubber boots, apron and rubber gloves. Contain spill with soda ash or lime. Sweep up and hold for disposal. Ventilate area and carefully wash spill site after material pickup is complete.

Waste Disposal Method Dispose of spillage, empty containers, and other materials used for clean up in accordance with all Federal, state, and local regulations.

Precautions to be Taken in Handling and Storing Corrosive Material! Store in cool, well-ventilated area, out of direct sunlight. Keep containers tightly closed. Protect against physical damage. Maintain effective ventilation during storage and handling. Store separate from incompatible materials. Recommended storage: 15 - 30 °C (59-86 °F). Light sensitive.

Other Precautions Containers, even when empty, will retain residue and vapors. Always obey hazard warnings and handle empty containers as if they were full. Avoid all contact, inhalation and ingestion. Wash thoroughly after handling.

Section VII Control Measures

Respiratory Protection *(Specify Type)* NIOSH/ MSHA approved respirator with acid/organic cartridge.

Ventilation				
	Local Exhaust	Required	**Special**	Eye wash nearby.
	Mechanical *(General)*	Recommended.	**Other**	Safety shower nearby.

Protective Gloves PVC or Neoprene **Eye Protection** Chemical Safety Goggles, Full Face Shield

Other Protective Clothing or Equipment Rubber apron, rubber boots.

Work /Hygienic Practices Do **NOT** wear contact lenses. Wash thoroughly after handling. Avoid eye and skin contact. Do not breathe vapors. Follow safe handling and laboratory practices. Wash hands prior to eating or smoking.

NOT FOR HUMAN CONSUMPTION! **CORROSIVE! TOXIC!**

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