



COLUMBUS CHEMICAL INDUSTRIES INC.

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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)

Boric Acid

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	Emergency Telephone Number
Columbus Chemical Industries, Inc.	CHEMTREC 1-800-424-9300
N4335 Temkin Road	Telephone Number for Information
Columbus, WI 53925-0008	920-623-2140
	Date Prepared
	02-02-2006
	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)
Boric Acid*	10043-35-3	N/A	5 mg/m ³ (dust)	10 mg/m ³	>90%
ACGIH-TWA					

SYNONYMS: Boracic Acid; Boron Trihydroxide; Orthoboric Acid.

Section III - Physical/Chemical Characteristics

Boiling Point (-1.5 H ₂ O)	300 °C (572 °F)	Specific Gravity (H ₂ O = 1)	1.435
Vapor Pressure (mm Hg) @20 °C (68 °F)	2.5 mmHg	Melting Point	169 °C (336 °F)
Vapor Density (AIR = 1)	Not Applicable	Evaporation Rate (Butyl Acetate = 1)	Not Applicable

Solubility in Water
 4.6% by weight @ 20 °C (68 °F); 6.3 g per 100cc H₂O @ 30 °C (86 °F); 27.6 g per 100cc H₂O @ 100 °C (212 °F).

Appearance and Odor
 White, crystalline powder, odorless.

Section IV Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
Not flammable.		Not Applicable	Not Applicable

Extinguishing Media
 Carbon dioxide, dry chemical powder, appropriate foam.

Special Fire Fighting Procedures
 In the event of a fire, wear full protective clothing and NIOSH/MSHA-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Unusual Fire and Explosion Hazards
 Emits toxic fumes under fire conditions.

Section V Reactivity Data

Stability	Unstable		Conditions to Avoid	Incompatible materials,
	Stable	X		moisture.

Incompatibility Materials to Avoid

Potassium, acid anhydrides. Sensitive to moisture.

Hazardous Decomposition or Byproducts

Boron Trioxide.

Hazardous Polymerization**Conditions to Avoid**

	May Occur		N/A
	Will Not Occur		

Section VI Health Hazard Data

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

Health Hazards (Acute and Chronic)

EYES/SKIN: May cause irritation. INHALATION: May be harmful if inhaled. May be irritating to the mucous membranes and upper respiratory tract. INGESTION: May be harmful if swallowed. May cause respiratory depression, cardiac

gastrointestinal disturbances, dermatitis, body temperature changes. Harmful to testes and developing fetus.

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

Signs and Symptoms of Exposure.

Itching, redness, swelling of exposed tissues. Dry skin. Wakefulness, somnolence, tremors, convulsions, difficulty breathing.

abdominal pain, nausea, vomiting, diarrhea, weakness.

Medical Conditions Generally Aggravated by Exposure

Kidney and liver disorders and respiratory diseases may be aggravated by exposure to this material.

Emergency and First Aid Procedures INGESTION: If swallowed, wash out mouth with water if person is conscious. EYES: In of contact, immediately flush with large amounts of water for at least 15 minutes. INHALATION: If inhaled remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. SKIN: Immediately wash skin with soap and large amounts of water. Contact a Physician.

Section VII Precautions for Safe Handling and Use**Steps to be Taken in Case Material is Released or Spilled**

Evacuate area. Wear NIOSH/MSHA-approved respirator, chemical-resistant goggles, rubber boots, apron and rubber gloves. Sweep up and place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Waste Disposal Method Dispose in accordance with all Federal, state, and local regulations.

Precautions to be Taken in Handling and Storing

Store in a cool, dry, well-ventilated area in tightly-closed, plainly-labelled containers. Protect against physical damage and light. Store in corrosion-proof area. Do not get in eyes or on skin or clothing. Avoid breathing dust. Wash thoroughly after handling.

Other Precautions Containers, even when empty, will retain residue. Always obey hazard warnings and handle empty containers as if they were full.

Section VII Control Measures

Respiratory Protection (Specify Type) Not required.

Ventilation	Local Exhaust	Recommended.	Special	Eyewash nearby.
	Mechanical (General)	Recommended.	Other	Safety shower nearby.

Protective Gloves Chemical resistant gloves. **Eye Protection** Chemical Safety goggles.

Other Protective Clothing or Equipment Rubber boots and clean body covering clothing.

Work /Hygienic Practices Contact lenses should not be worn when working with this material. Do not breathe dust. Avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Wash thoroughly after handling. Avoid raising dust. Avoid prolonged or repeated exposure.

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