

Material Safety Data Sheet

BORIC ACID

Section 1 - Product Identification

Synonyms : Boric acid; Boracic acid; Hydrogen borate; Orthoboric acid
CAS No. : 10043-35-3
Molecular Weight : 61.83 g/mol
Chemical Formula : H₃BO₃
Company Identification : Tradeasia International Pte. Limited
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Section 2 – Composition/Information on Ingredients

<u>Ingredient</u>	<u>CAS</u>	<u>No Percent</u>	<u>Number CE</u>
Boric Acid	10043-35-3	99%	233-139-2

Section 3 – Hazards Identification

Non-hazardous product by guidance of 67/548/CEE

Section 4 – First-Aid Measures

- Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- Skin: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
- Ingestion: Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Wash mouth out with water.
- Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Antidote: None reported.

Section 5 – Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressuredemand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 – Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 – Handling and Storage

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep containers tightly closed.

Section 8 – Exposure Controls/Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA – Final PELs
Boric Acid	None Listed	None Listed	None Listed

OSHA Vacated PELs: Boric acid: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear a chemical apron. Wear appropriate protective clothing to prevent skin exposure.

Respirators: A NIOSH/MSHA approved air purifying dust or mist respirator or European Standard EN 149.

Section 9 – Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: odorless

pH: 5.2 (1% sol. at 20°C)

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: Negligible.

Viscosity: Not applicable.

Boiling Point: Not available.

Freezing/Melting Point: 339 °F

Decomposition Temperature: Not available.

Solubility: 4.9g/100g water at 20°C.

Specific Gravity/Density: 1.44 (Water=1)

Molecular Formula: H_3BO_3

Molecular Weight: 61.83

Section 10 – Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. Boric acid is a stable product, but when heated it loses water, first

Forming Metaboric acid (HBO_2), and on further heating it is converted into Boric Oxide (B_2O_3).

Conditions to Avoid: High temperatures, incompatible materials, dust generation, exposure to moist air or water.

Incompatibilities with Other Materials: Reaction with strong reducing agents, such as metal hydrides or alkali metals, will generate hydrogen gas, which could create an explosion hazard., caustics (e.g. ammonia, ammonium hydroxide, calcium hydroxide, potassium hydroxide, sodium hydroxide), acetic anhydride, alkali carbonates.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, oxides of boron.

Hazardous Polymerization: Has not been reported

Section 11 – Toxicological Information

RTECS#:

CAS# 10043-35-3: ED4550000; ED4560000

LD50/LC50:

CAS# 10043-35-3:

Oral, mouse: LD50 = 3450 mg/kg;

Oral, rat: LD50 = 2660 mg/kg;

Oral, rat: LD50 = 2500 mg/kg;

Carcinogenicity:

CAS# 10043-35-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: No information available.

Reproductive Effects: No information available.

Neurotoxicity: No information available.

Mutagenicity: No information available.

Other Studies: None.

Section 12 – Ecological Information

Ecotoxicity: Water flea Daphnia: LC50 = 115.0-153.0 mg/L; 48 Hr.; Static Condition Fish:

Rainbow trout: LC50=150mg B/L; 24-day; Fish: Goldfish: LC50=46mg B/L; 7-day;

Mosquito fish (fresh water) TLm=1800 ppm/24H Mosquito fish (fresh water) TLm=1800 ppm/24H

Environmental: Boric acid is a water-soluble white powder that may, at high concentrations, cause damage to trees or vegetation by root absorption.

Physical: No information available.

Other: None.

Section 13 – Disposal Considerations

Product:

The chemicals should be disposed according to national regulations.

Packing:

The containers should be disposed according to national regulations.

Section 14 – Transport Information

Not subject to regulation of transport

Section 15 – Regulatory Information

Labeled in accordance with the regulations of the EEC.

Information on risks and safety:

Keep away from food

Section 16 : Additional Information

The information contained in this safety data sheet is based on our current knowledge. Only describes safety measures when handling this product and does not represent a guarantee about the properties of the same.

