

Safety Data Sheet

Boric Acid, NF, Powder

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Boric Acid, NF, Powder

Synonyms/Generic Names: Boron Trihydroxide; Orthoboric Acid; Boracic Acid

Product Number: 0873

Product Use: Industrial, Manufacturing or Laboratory use

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC – 800-424-9300 or 703-527-3887 (24 Hours/Day, 7Days/Week)

2. HAZARDS IDENTIFICATION

Signal Words: Danger

Pictograms:



GHS Classification:

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|-----------------------|------------|
| Acute toxicity, Oral | Category 5 |
| Reproductive toxicity | Category 1 |

GHS Label Elements, including precautionary statements:

Hazard Statements:

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| H303 | May be harmful if swallowed |
| H360 | May damage fertility or the unborn child. |

Precautionary Statements:

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| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P308+P313 | IF exposed or concerned: Get medical advice/attention. |
| P312 | Call a POISON CENTER/doctor/physician if you feel unwell. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local regulations. |

Potential Health Effects

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|-------------------|--|
| Eyes | Causes eye irritation. |
| Inhalation | May be harmful if inhaled. Causes respiratory tract irritation. |
| Skin | May be harmful if absorbed through skin. Causes skin irritation. |
| Ingestion | May be harmful if swallowed. |

NFPA Ratings

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|------------------------|---------------|
| Health | 1 |
| Flammability | 0 |
| Reactivity | 0 |
| Specific hazard | Not Available |

HMIS Ratings

| | |
|-------------------|---|
| Health | 2 |
| Fire | 0 |
| Reactivity | 0 |

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | Weight % | CAS # | EINECS# / ELINCS# | Formula | Molecular Weight |
|------------|----------|------------|-------------------|--------------------------------|------------------|
| Boric Acid | >99 | 10043-35-3 | 233-139-2 | H ₃ BO ₃ | 61.83 g/mole |

4. FIRST-AID MEASURES

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| Eyes | Rinse with plenty of water for at least 15 minutes and seek medical attention. |
| Inhalation | Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention. |
| Skin | Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention. |
| Ingestion | Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention. |

5. FIREFIGHTING MEASURES

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| Suitable (and unsuitable) extinguishing media | Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water. |
| Special protective equipment and precautions for firefighters | Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. |
| Specific hazards arising from the chemical | A mixture of potassium and boric acid may explode upon impact. A mixture of boric acid and acetic anhydride will explode when heated to 58-60°C. Emits toxic fumes (Borane, Boron oxides) under fire conditions. (See also Stability and Reactivity section). |

6. ACCIDENTAL RELEASE MEASURES

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| Personal precautions, protective equipment and emergency procedures | See section 8 for recommendations on the use of personal protective equipment. |
| Environmental precautions | Do not disperse dust into the air during cleanup. Any release to the environment may require reporting to federal/national or local agencies. |
| Methods and materials for containment and cleaning up | Ventilate the release area. Do not disperse dust into the air during clean-up. Pick up and arrange disposal without creating dust. Sweep up and place in a closed container. Dispose of all waste or cleanup materials in accordance with local regulations. |

7. HANDLING AND STORAGE

Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment.

Conditions for safe storage, including any incompatibilities

Store in a tightly closed container. Store in a dry, cool and ventilated area. Do not become exposed to the material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Controls:

| Component | Exposure Limits | Basis | Entity |
|------------|---------------------|-------|--------|
| Boric Acid | 2 mg/m ³ | TLV | ACGIH |
| | 6 mg/m ³ | STEL | ACGIH |

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

| | |
|-------------------|---|
| Eyes | Wear chemical safety glasses and/or full face shield where dust formation is possible. |
| Inhalation | Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator. |
| Skin | Wear rubber gloves and protective clothes with lab coat or coveralls/apron. |
| Other | Not Available |

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

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| Appearance (physical state, color, etc.) | White crystalline powder. Solid. |
| Odor | No odor |
| Odor threshold | Not Available |
| pH | 5.2 (1% aq. Soln.) |
| Melting point/freezing point | 169°C (336°F) |
| Initial boiling point and boiling range | 300°C (572°F) @ 760 mmHg |
| Flash point | Not Flammable |
| Evaporation rate | Not Available |
| Flammability (solid, gas) | Not Flammable |
| Upper/lower flammability or explosive limit | Not Explosive |
| Vapor pressure | Not Available |
| Vapor density | (air=1) Not Available |
| Relative density | Not Available |
| Solubility (ies) | Soluble |

| | |
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| Partition coefficient: n-octanol/water | Not Available |
| Auto-ignition temperature | Not Flammable |
| Decomposition temperature | Not Available |

10. STABILITY AND REACTIVITY

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| Chemical Stability | Stable |
| Possibility of Hazardous Reactions | Will not occur. |
| Conditions to Avoid | Moisture; excessive heat; dusting conditions |
| Incompatible Materials | Potassium; Acetic Anhydride; alkalis |
| Hazardous Decomposition Products | Borane; Boron oxides |

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Boric Acid

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| Skin | Not Available |
| Eyes | Not Available |
| Respiratory | Not Available |
| Ingestion | LD50 Oral – rat – 2660 mg/kg LD50 Oral – mouse – 3450 mg/kg |

Carcinogenicity

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|--------------|--|
| IARC | No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. |
| ACGIH | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. |
| NTP | No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |
| OSHA | No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |

Signs & Symptoms of Exposure

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| Skin | Redness, itching |
| Eyes | Redness, itching, tearing, conjunctivitis |
| Respiratory | Irritation of mucous membranes, coughing, wheezing, shortness of breath |
| Ingestion | Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain |

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| Chronic Toxicity | Not Available |
| Teratogenicity | Teratogenic; presumed human reproductive toxicant |
| Mutagenicity | Mutagenic effects have occurred in microorganisms |
| Embryotoxicity | May cause harm; developmental effects have occurred in experimental animals |
| Specific Target Organ Toxicity | Kidneys, circulatory and central nervous system. |
| Reproductive Toxicity | In animal testing, risk of impaired fertility was shown only after administration of very high doses of this substance. |
| Respiratory/Skin Sensitization | Not Available |

12. ECOLOGICAL INFORMATION

Ecotoxicity

Boric Acid

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| Aquatic Vertebrate | Fish: LC50 (<i>Ptychocheilus lucius</i>) - 279 mg/l (96 hr) Fish: LC50 <i>Lepomis macrochirus</i> – 1021 mg/l (96 hr) |
| Aquatic Invertebrate | LC50 <i>Daphnia magna</i> – 53.2 mg/l (21 days) EC50 <i>Daphnia magna</i> – 133 mg/l (48 hr) |
| Terrestrial | Not Available |

| | |
|--------------------------------------|---------------|
| Persistence and Degradability | Not Available |
| Bioaccumulative Potential | Not Available |
| Mobility in Soil | Not Available |
| PBT and vPvB Assessment | Not Available |
| Other Adverse Effects | Not Available |

13. DISPOSAL CONSIDERATIONS

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|----------------------------------|---|
| Waste Product or Residues | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue. |
| Product Containers | Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container. |

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORT INFORMATION

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| US DOT | Not Dangerous Goods |
| TDG | Not Dangerous Goods |
| IMDG | Not Dangerous Goods |
| Marine Pollutant | No |
| IATA/ICAO | Not Dangerous Goods |

15. REGULATORY INFORMATION

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| TSCA Inventory Status | All ingredients are listed on the TSCA Active inventory. |
| DSL / NDSL | All ingredients are listed on the DSL inventory. |
| California Proposition 65 | Not Listed |
| Rhode Island: Hazardous Substance List | Not Listed |
| Massachusetts: Toxic or Hazardous Substance List, Right to Know | Not Listed |
| Pennsylvania: Hazardous Substance List | Not Listed |
| New Jersey: Right to Know Hazardous Substance List | Not Listed |
| SARA 302 | Not Listed |
| SARA 304 | Not Listed |

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| SARA 311 | Acute Health Hazard, Chronic Health Hazard. |
| SARA 312 | Acute Health Hazard, Chronic Health Hazard. |
| SARA 313 | Not Listed |
| WHMIS Canada | Not Listed |

16. OTHER INFORMATION

| Revision | Date |
|------------|------------|
| Original | 07/01/2011 |
| Revision 1 | 08/06/2013 |
| Revision 2 | 05/05/2015 |
| Revision 3 | 09/27/2021 |

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