



Safety Data Sheet

In accordance with CFR 1910.1200 (OSHA HCS)

SDS No. 260

Review Date: August 10, 2018

1 Identification of substance and company

Product name: **Boric Acid**
Product code: 17707, 90208, 90689, C2063
Relevant use and restrictions on use: Research and product development
Manufacturer/Supplier: Noah Technologies Corporation
1 Noah Park
San Antonio, Texas 78249-3419
Phone: 210-691-2000
Fax: 210-691-2600
Web site: www.noahtech.com

Emergency information: CHEMTREC
800-424-9300

2 Hazards identification

Emergency Overview:

Pictogram(s):



Signal word(s):

Danger

Hazard statements:

H360D May damage the unborn child

Precautionary statements:

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+313 IF exposed or concerned: Get medical advise/ attention
P405 Store locked up
P501 Dispose of contents/ container to an approved waste disposal plant

GHS Classification:

Reproductive toxicity - 1B

Hazards not otherwise classified:

None

HMIS ratings (scale 0-4):

Health hazard: 1*
Flammability: 0
Physical hazard: 0

3 Composition/Information on ingredients

Chemical name: Boric Acid
CAS number: 10043-35-3
EC number: 233-139-2
Formula: H₃BO₃
Synonyms: Orthoboric acid; Borofax, Boracic acid
Ingredients of known acute toxicity: Boric Acid

4 First aid measures

After inhalation: Move victim into fresh air. If not breathing, give artificial respiration. Consult a physician.
After skin contact: Wash off with soap and plenty of water. Consult a physician.
After eye contact: Flush with plenty of water for at least 15 minutes. Consult a physician.
After ingestion: Never give anything to an unconscious person. Rinse mouth with water. Consult a physician.
Information for doctor: Show this safety data sheet to the doctor in attendance
Symptoms/effects; acute and delayed: Diarrhea, abdominal cramps, erythematous lesions on skin and mucous membranes, circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma

Immediate medical attention and special treatment needed: No data available

5 Fire-fighting measures

Suitable and unsuitable extinguishing agents: Water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use extinguishing media most suitable to surrounding fire conditions.

Special hazards caused by the material, its products of combustion or resulting gases: Boron oxides

Special fire fighting procedures: Wear self-contained breathing apparatus. Always wear full fire fighting equipment/ clothing in fire situations.

Unusual fire and explosion hazard: No data available

6 Accidental release measures

Person-related safety precautions: Use personal protective equipment. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe area.

Measures for environmental protection: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Measures for cleaning/collecting: Sweep or scoop up and remove. Wear personal protective equipment. Ventilate area and wash spill site after material pickup is complete. Keep in suitable, closed containers for disposal.

Additional information: See Section 7 for information on safe handling
See Section 8 for information on personal protective equipment
See Section 13 for information on disposal
See Section 15 for regulatory information

7 Handling and storage

Information for safe handling: Ensure adequate ventilation. Avoid formation of dust and aerosols.

Information about protection against explosions and fires: No data available

Storage requirements to be met by storerooms and containers: Keep container tightly closed. Store in a cool, dry place.

Incompatibility (avoid contact with): Strong acids. Strong alkalis.
Acetic anhydride, potassium, alkali carbonates, hydroxides

Further information about storage conditions: Contact with incompatibles

8 Exposure controls/personal protection

Ventilation requirements: Local exhaust. Chemical fume hood.

Components with exposure limits that require monitoring: ACGIH TLV: TWA 2 mg/m³ - Upper respiratory tract irritation, not classifiable as a human carcinogen

General protective and hygienic measures: The usual precautionary measures for handling chemicals should be adhered to
Keep away from foodstuffs, beverages and food
Instantly remove any soiled and impregnated garments
Wash hands during breaks and at the end of the work
Avoid contact with the eyes and skin

Personal protective equipment:

Respiratory protection: Filter-dust, fume, mist
(Use only NIOSH or CEN approved Equipment)

Hand protection: Handle with gloves: Natural rubber / Neoprene / Polyvinyl chloride / Impervious
Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with product.

Eye protection: Goggles

Skin protection: Protective work clothing sufficient to prevent contact.

Additional protective equipment: Emergency eyewash and safety shower.

Precautionary labeling: Do not get in eyes, on skin or on clothing
Do not breathe dust, vapor, mist, gas
Store in tightly closed containers.

9 Physical and chemical properties

Physical state: Crystalline solid

Color: White

Odor: Odorless

Odor threshold: No data available

Molecular Weight (Calculated): 61.83

pH 5.1 (1% solution @ 20 C)

Melting point/freezing point/range: 170.9 C

Boiling point/range: 300 C

Sublimation temperature/start: No data available

Decomposition temperature: No data available

Flammability (solid, gas): Non-flammable

Flash point: No data available

Autoignition temperature: No data available

Danger of explosion: No data available

Flammable limits:

Lower: No data available

Upper: No data available

Evaporation Rate: No data available

Vapor pressure (mm Hg): 2.6 mmHg @ 20 C

Vapor density: No data available

Specific gravity: 1.435

Bulk density: No data available

Solubility in/Miscibility with water: 63.5 g/L @ 30 C

Partition coefficient n-octanol/water: No data available

Viscosity: No data available

Other information: No data available

10 Stability and reactivity

Reactivity:	No data available
Chemical stability:	Stable under recommended storage conditions
Possibility of hazardous reactions:	No data available
Conditions to be avoided:	Contact with incompatibles See section 7 for information on proper handling and storage
Materials to be avoided:	Strong acids and alkalis. Acetic anhydride, potassium, alkali carbonates, hydroxides
Dangerous reactions:	No data available
Hazardous decomposition products: (thermal and other)	Boron oxides

11 Toxicological information

LD/LC50 values that are relevant for classification:	oral-rat LD ₅₀ : 2,660 mg/kg
Irritation or corrosion of skin:	No data available
Irritation or corrosion of eyes:	No data available
Primary irritant or corrosive effect:	
on the skin:	Mild
on the eye:	Mild
Sensitization:	No data available
Potential health effects:	
Inhalation:	Irritating to the upper respiratory tract
Ingestion:	No data available
Skin:	No data available
Eyes:	No data available
Signs and symptoms of exposure:	Poison by ingestion and possible other routes. Moderately toxic by skin contact and subcutaneous routes in humans. Moderately toxic by intraperitoneal and intravenous routes. Human systemic effects by unspecified routes. Ingestion or absorption by other routes may also cause diarrhea, abdominal cramps, erythematous lesions on skin and mucous membranes, circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma. Death has occurred from ingestion of less than 5 grams in infants and from 50 to 20 grams in adults. Experimental reproductive effects. Mutagenic and teratogenic data. Readily absorbed through skin. May cause cyanosis, a blue-gray coloring of skin and lips caused by lack of oxygen.
Carcinogenicity:	IARC: No component of this product is identified as probable, possible or confirmed human carcinogen by IARC. NTP: No component of this product is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product is identified as a carcinogen or potential carcinogen by OSHA.
Additional information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known

12 Ecotoxicological information

Toxicity:	
Toxicity to fish:	Rainbow trout LC ₅₀ : 150 mg (B) / L:24D Rainbow trout LC ₅₀ : 100 mg (B) / L:32D Goldfish LC ₅₀ : 178 mg (B) / L:3D Goldfish LC ₅₀ : 46 mg (B) / L:7D
Toxicity to daphnia and other aquatic invertebrates:	Daphnia magna EC ₅₀ : 133 mg (B) / L:48H Green algae EC ₁₀ : 24 mg (B) / L:96H
Toxicity to algae:	
Persistence and degradability:	
Biodegradability:	No data available
Bioaccumulative potential:	
Bioaccumulation:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

13 Disposal considerations

Recommendation:	Consult state, local or national regulation for proper disposal Allow professional disposal company to handle waste Must be specially treated under adherence to official regulations
Unclean packagings recommendation:	Disposal must be made according to official regulations

14 Transport information

Land transport DOT	
Proper shipping name:	Chemicals Non-Hazardous
Technical name:	Boric acid
Air transport ICAO-TI and IATA-DGR:	
Proper shipping name:	Chemicals Non-Hazardous

Technical name: Boric acid

UPS Ground / FedEx Ground

Proper shipping name: Chemicals Non-Hazardous

Technical name: Boric acid

UPS Air

Proper shipping name: Chemicals Non-Hazardous

Technical name: Boric acid

15 Regulatory information

SARA Section 302 Extremely Hazardous components and corresponding TPQs:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA Section 311 / 312 hazards:

Chronic Health Hazard

SARA Section 313 components:

This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313

California Proposition 65 components:

This product does not contain any chemicals known to the State of California to cause birth defects or any other reproductive harm.

TSCA:

Product is listed on the TSCA Inventory

16 Other information

The above information is accurate to the best of our knowledge. However, since data, safety standards and government regulation are subject to change and the conditions of handling and use, or misuse are beyond our control. NOAH MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON. User should satisfy himself that he has all current data relevant to his particular use.