Safety Data Sheet

Cat. # RC-028

Boric Acid

Size: 500g
# SECTION 1: Identification

## 1.1. Identification

<table>
<thead>
<tr>
<th>Product form: Substance</th>
<th>Substance name: boric acid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical name: Boric Acid</td>
<td></td>
</tr>
<tr>
<td>CAS-No.: 10043-35-3</td>
<td></td>
</tr>
<tr>
<td>Product code: 157B</td>
<td></td>
</tr>
<tr>
<td>Formula: H₃BO₃</td>
<td></td>
</tr>
<tr>
<td>Synonyms: basilit B / boracic acid / boric acid / boric acid (H₃BO₃) / borofax / boron trihydroxide / dr.'s 1 flea terminator DF / dr.'s 1 flea terminator DFPBO / dr.'s 1 flea terminator DT / dr.'s 1 flea terminator DTPBO / E284 / epa pesticide code 011001 / flea prune / LUCHEM AT / OPTIBOR NF / OPTIBOR SP / OPTIBOR SQ / OPTIBOR TG / OPTIBOR TP / ortho-boric acid / sassolite / super flea eliminator / three elephant / trihydroxyborone</td>
<td></td>
</tr>
<tr>
<td>BIG no.: 10595</td>
<td></td>
</tr>
</tbody>
</table>

## 1.2. Recommended use and restrictions on use

Use of the substance/mixture: Wood: preservative
Chemical raw material
Industrial use

## 1.3. Supplier

Geno Technology, Inc./G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

## 1.4. Emergency telephone number

Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

# SECTION 2: Hazard(s) identification

## 2.1. Classification of the substance or mixture

<table>
<thead>
<tr>
<th>GHS-US classification</th>
<th>Hazardous to the aquatic environment - Acute Hazard Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
</tbody>
</table>

Full text of H statements: see section 16

## 2.2. GHS Label elements, including precautionary statements

<table>
<thead>
<tr>
<th>GHS-US labeling</th>
<th>Hazard statements (GHS-US)</th>
<th>H402 - Harmful to aquatic life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precautionary statements (GHS-US)</td>
<td>P273 - Avoid release to the environment.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation</td>
<td></td>
</tr>
</tbody>
</table>

## 2.3. Other hazards which do not result in classification

No additional information available

## 2.4. Unknown acute toxicity (GHS US)

Not applicable

# SECTION 3: Composition/Information on ingredients

## 3.1. Substances

| Substance type | Mono-constituent |
**boric acid**  
Safety Data Sheet  
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| boric acid  
(Main constituent) | boric acid / boric acid / boron trihydroxide / dr.’s 1 flea terminator DF / dr.’s 1 flea terminator DFPBO / dr.’s 1 flea terminator DT / dr.’s 1 flea terminator DTPBO / e284 / epa pesticide code 011001 / flea prufe / LUCHEM AT / OPTIBOR NF / OPTIBOR SP / OPTIBOR SQ / OPTIBOR TG / OPTIBOR TP / ortho-boric acid / sassafrass / super flea eliminator / three elephant / trihydroxyborone | (CAS-No.) 10043-35-3 | 100 | Aquatic Acute 3, H402 |

Full text of hazard classes and H-statements: see section 16

### 3.2. Mixtures

Not applicable

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures


- **First-aid measures after inhalation**: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

- **First-aid measures after skin contact**: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

- **First-aid measures after eye contact**: Rinse with water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.

- **First-aid measures after ingestion**: Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Victim is fully conscious: immediately induce vomiting. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

#### 4.2. Most important symptoms and effects (acute and delayed)

- **Potential Adverse human health effects and symptoms**: Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Slightly irritant to skin. Slightly irritant to respiratory organs. Slightly irritant to eyes.


- **Symptoms/effects after skin contact**: Slight irritation. Red skin.

- **Symptoms/effects after eye contact**: Redness of the eye tissue. Slight irritation. Visual disturbances.


#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

- **Suitable extinguishing media**: Water spray. Dry powder. Foam.

#### 5.2. Specific hazards arising from the chemical

- **Fire hazard**: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: Reactions involving a fire hazard: see "Reactivity Hazard".

- **Explosion hazard**: INDIRECT EXPLOSION HAZARD: Reactions with explosion hazards: see "Reactivity Hazard".

- **Reactivity**: Decomposes on exposure to temperature rise. Reacts on exposure to temperature rise with (some) compounds: (increased) risk of fire/explosion.
5.3. **Special protective equipment and precautions for fire-fighters**

**Firefighting instructions**: Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it.

**Protection during firefighting**: Heat/fire exposure: compressed air/oxygen apparatus.

**SECTION 6: Accidental release measures**

6.1. **Personal precautions, protective equipment and emergency procedures**

6.1.1. **For non-emergency personnel**


**Measures in case of dust release**: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. **For emergency responders**

**Protective equipment**: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: “Exposure controls/personal protection”.

6.2. **Environmental precautions**

Prevent soil and water pollution. Prevent spreading in sewers.

6.3. **Methods and material for containment and cleaning up**

For containment: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray. Hazardous reaction: measure explosive gas-air mixture. Reaction: dilute combustible gas/vapour with water curtain.

Methods for cleaning up: Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

**Other information**: Dispose of materials or solid residues at an authorized site.

6.4. **Reference to other sections**

For further information refer to section 13.

**SECTION 7: Handling and storage**

7.1. **Precautions for safe handling**

**Precautions for safe handling**: Avoid raising dust. Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.

**Hygiene measures**: Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. **Conditions for safe storage, including any incompatibilities**

**Storage conditions**: Store locked up. Store in a well-ventilated place. Keep cool.

**Storage temperature**: 20 °C

**Heat-ignition**: KEEP SUBSTANCE AWAY FROM: heat sources.

**Information on mixed storage**: KEEP SUBSTANCE AWAY FROM: (strong) bases. water/moisture.

**Storage area**: Store at ambient temperature. Store in a dry area. Keep container in a well-ventilated place. Keep only in the original container. Keep locked up. Unauthorized persons are not admitted. Meet the legal requirements.

**Special rules on packaging**: SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

**Packaging materials**: SUITABLE MATERIAL: polypropylene. glass. plastics. paper. cardboard. wood.

**SECTION 8: Exposure controls/personal protection**

8.1. **Control parameters**

<table>
<thead>
<tr>
<th>boric acid (10043-35-3)</th>
<th>ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
<th>ACGIH STEL (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACGIH</td>
<td>2 mg/m³ (Inhalable fraction)</td>
<td>6 mg/m³ (Inhalable fraction)</td>
</tr>
</tbody>
</table>
8.2. Appropriate engineering controls
Appropriate engineering controls: Ensure good ventilation of the work station.
Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Materials for protective clothing:
GIVE GOOD RESISTANCE: butyl rubber. neoprene. nitrile rubber. viton

Hand protection:
Gloves

Eye protection:
Safety glasses. In case of dust production: protective goggles

Skin and body protection:
Protective clothing

Respiratory protection:
Dust production: dust mask with filter type P3. High dust production: self-contained breathing apparatus

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Color</td>
<td>Colourless or white</td>
</tr>
<tr>
<td>Odor</td>
<td>Odourless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4 (5 %)</td>
</tr>
<tr>
<td>Melting point</td>
<td>171 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>2.7 hPa (20 °C)</td>
</tr>
<tr>
<td>Vapor pressure at 50 °C</td>
<td>10.5 hPa</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>2.1</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>61.83 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Moderately soluble in water. Substance sinks in water. Soluble in ethanol. Soluble in methanol. Soluble in isobutanol. Soluble in glycerol. Soluble in sulfuric acid. Soluble in oils/fats. Water: 4.8 g/100ml Ethanol: 16.7 g/100ml</td>
</tr>
<tr>
<td>Log Pow</td>
<td>-1.09 (Experimental value, EU Method A.8: Partition Coefficient, 22 °C)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>171 °C</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>
9.2. Other information

VOC content : Not applicable (inorganic)
Other properties : Translucent. Hygroscopic. Acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity
Decomposes on exposure to temperature rise. Reacts on exposure to temperature rise with (some) compounds: (increased) risk of fire/explosion.

10.2. Chemical stability
Hygroscopic.

10.3. Possibility of hazardous reactions
No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid
None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

<table>
<thead>
<tr>
<th>Boric acid (10043-35-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Not classified
pH: 4 (5 %)

Serious eye damage/irritation : Not classified
pH: 4 (5 %)

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Potential Adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral 2000/5000 mg/kg). Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). Slightly irritant to skin. Slightly irritant to respiratory organs. Slightly irritant to eyes.


Symptoms/effects after skin contact : Slight irritation. Red skin.

Symptoms/effects after eye contact : Redness of the eye tissue. Slight irritation. Visual disturbances.


SECTION 12: Ecological information

12.1. Toxicity
Ecology - general: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

<table>
<thead>
<tr>
<th>boric acid (10043-35-3)</th>
<th>LC50 fish 1</th>
<th>79.7 mg/l (EPA OPPTS 850.1075, 96 h, Pimephales promelas, Static system, Fresh water, Experimental value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ECS0 Daphnia 1</td>
<td>133 mg/l (ASTM E729-80, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)</td>
</tr>
<tr>
<td></td>
<td>ErC50 (algae)</td>
<td>52.5 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence, GLP)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>boric acid (10043-35-3)</th>
<th>Persistence and degradability</th>
<th>Biodegradability in soil: not applicable. Biodegradability: not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>boric acid (10043-35-3)</th>
<th>BCF fish 1</th>
<th>&lt; 0.1 (60 day(s), Oncorhynchus tshawytscha, Flow-through system, Fresh water, Weight of evidence, Fresh weight)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Log Pow</td>
<td>-1.09 (Experimental value, EU Method A.8: Partition Coefficient, 22 °C)</td>
</tr>
<tr>
<td></td>
<td>Bioaccumulative potential</td>
<td>Not bioaccumulative.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

| boric acid (10043-35-3) | Ecology - soil | No (test)data on mobility of the substance available. May be harmful to plant growth, blooming and fruit formation. |

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations: Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized dump (Class I). Detoxicate.
SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT

Other information : No supplementary information available.

Transportation of Dangerous Goods

Transport by sea
Not regulated

Air transport
Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

boric acid (10043-35-3)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

15.3. US State regulations
No additional information available

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 05/11/2017

Full text of H-phrases:

<table>
<thead>
<tr>
<th>H402</th>
<th>Harmful to aquatic life</th>
</tr>
</thead>
</table>

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

SDS US (GHS HazCom 2012)
This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product