

SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : Boric Acid
CAS-No. : 10043-35-3
Product code : LC11715
Formula : H3BO3

1.2. Recommended use and restrictions on use

Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Supplier

LabChem, Inc.
1010 Jackson's Pointe Ct.
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Reproductive toxicity Category 1B H360 May damage fertility or the unborn child
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H360 - May damage fertility or the unborn child
Precautionary statements (GHS US) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, eye protection.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P405 - Store locked up.
P501 - Dispose of contents/container to comply with local, state and federal regulations.

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

| Name | Product identifier | % | GHS US classification |
|----------------------------------|----------------------|-----|-----------------------|
| Boric Acid (Main constituent) | (CAS-No.) 10043-35-3 | 100 | Repr. 1B, H360 |

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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 general | : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention. |
| First-aid measures after inhalation | : Allow affected person to breathe fresh air. Allow the victim to rest. |
| First-aid measures after skin contact | : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. |
| First-aid measures after eye contact | : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. |
| First-aid measures after ingestion | : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. |

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

| | |
|-----------------------------------------------------|---------------------------------------------------------------------|
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |
| Symptoms/effects | : May damage fertility or the unborn child. |
| Symptoms/effects after inhalation | : May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Slight irritation. |
| Symptoms/effects after eye contact | : May cause slight irritation. |
| Symptoms/effects after ingestion | : Nausea. Vomiting. Diarrhoea. May cause cyanosis. |
| Chronic symptoms | : Cracking of the skin. |

4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

| | |
|--------------------------------|--------------------------------------------------------|
| Suitable extinguishing media | : Foam. Dry powder. Carbon dioxide. Water spray. Sand. |
| Unsuitable extinguishing media | : Do not use a heavy water stream. |

5.2. Specific hazards arising from the chemical

| | |
|----------------------------|-------------------|
| Fire hazard | : Not flammable. |
| Explosion hazard | : Not applicable. |
| Reactivity in case of fire | : None. |

5.3. Special protective equipment and precautions for fire-fighters

| | |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Firefighting instructions | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

| | |
|----------------------|-----------------------------------|
| Emergency procedures | : Evacuate unnecessary personnel. |
|----------------------|-----------------------------------|

6.1.2. For emergency responders

| | |
|----------------------|----------------------------------------------|
| Protective equipment | : Equip cleanup crew with proper protection. |
| Emergency procedures | : Ventilate area. |

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

| | |
|-------------------------|--------------------------------------------------------------------------------------------------------------------|
| Methods for cleaning up | : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials. |
|-------------------------|--------------------------------------------------------------------------------------------------------------------|

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use.
- Incompatible products : Strong bases. Strong oxidizers.
- Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Boric Acid (10043-35-3) | | |
|-------------------------|------------------------------------|---------------------|
| ACGIH | ACGIH TWA (mg/m ³) | 2 mg/m ³ |
| ACGIH | ACGIH Ceiling (mg/m ³) | 6 mg/m ³ |

8.2. Appropriate engineering controls

- Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Gloves. Dust formation: dust mask.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Dust formation: dust mask

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Powder.
- Color : White
- Odor : odorless
- Odor threshold : No data available
- pH : 3.8 – 4.8 3.3% solution
- Melting point : 169 °C

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| | |
|---------------------------------------------|----------------------------------------------------------------------------------------------|
| Freezing point | : No data available |
| Boiling point | : 300 °C |
| Flash point | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapor pressure | : 2.7 mbar 20°C |
| Relative vapor density at 20 °C | : No data available |
| Relative density | : No data available |
| Specific gravity / density | : 1.435 g/cm ³ |
| Molecular mass | : 61.83 g/mol |
| Solubility | : Soluble in water. Water: 6.35 g/100ml Ethanol: 5.56 g/100ml Ether: 0.0078 g/100ml |
| Log Pow | : -0.757 |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : 100 °C |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : Not applicable. |
| Oxidizing properties | : None. |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

None.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong bases.

10.6. Hazardous decomposition products

boron.

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 |

| Boric Acid (10043-35-3) | |
|-------------------------|------------|
| LD50 oral rat | 2660 mg/kg |
| LD50 dermal rabbit | 2000 mg/kg |

| | |
|-----------------------------------|-------------------------------------------------|
| Skin corrosion/irritation | : Not classified pH: 3.8 – 4.8 3.3% solution |
| Serious eye damage/irritation | : Not classified pH: 3.8 – 4.8 3.3% solution |
| Respiratory or skin sensitization | : Not classified |

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| | |
|-----------------------------------------------------|---------------------------------------------------------------------|
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : May damage fertility or the unborn child. |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |
| Viscosity, kinematic | : No data available |
| Likely routes of exposure | : Inhalation. Skin and eye contact. |
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |
| Symptoms/effects | : May damage fertility or the unborn child. |
| Symptoms/effects after inhalation | : May cause respiratory irritation. |
| Symptoms/effects after skin contact | : Slight irritation. |
| Symptoms/effects after eye contact | : May cause slight irritation. |
| Symptoms/effects after ingestion | : Nausea. Vomiting. Diarrhoea. May cause cyanosis. |
| Chronic symptoms | : Cracking of the skin. |

SECTION 12: Ecological information

12.1. Toxicity

| Boric Acid (10043-35-3) | |
|-------------------------|-----------------------------------|
| LC50 fish 1 | 5600 mg/l <i>Gambusia affinis</i> |
| EC50 Daphnia 1 | 115 mg/l |
| EC50 Daphnia 2 | 658 – 875 mg/l |

12.2. Persistence and degradability

| Boric Acid (10043-35-3) | |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |

12.3. Bioaccumulative potential

| Boric Acid (10043-35-3) | |
|---------------------------|------------------|
| Log Pow | -0.757 |
| Bioaccumulative potential | Not established. |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

| | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Waste disposal recommendations | : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations. |
| Ecology - waste materials | : Avoid release to the environment. |

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transport by sea

Not regulated

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Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Boric Acid (10043-35-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SARA Section 311/312 Hazard Classes | Health hazard - Reproductive toxicity

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

Boric Acid (10043-35-3)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

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

Revision date : 05/22/2020

Other information : None.

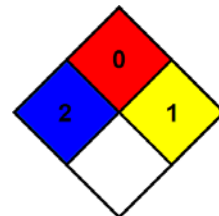
Full text of H-phrases: see section 16:

| | |
|------|------------------------------------------|
| H360 | May damage fertility or the unborn child |
|------|------------------------------------------|

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

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 : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.



Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal protection : E

E - Safety glasses, Gloves, Dust respirator

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