Boric Acid

Safety Data Sheet

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

Issue date: 07/24/2006 Revision date: 09/09/2021 Supersedes: 05/22/2020 Version: 1.3

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

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.

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)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Boric acid
ACGIH OEL TWA	2 mg/m³
ACGIH STEL (mg/m³)	6 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2021

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
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
Density	:	1.435 g/cm³
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
No data availableViscosity, 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

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 Gambusia affinis
EC50 Daphnia 1	115 mg/l 48H, Daphnia magna
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 (IMDG)

Not regulated

Air transport (IATA/ICAO)

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 as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Boric Acid	CAS-No. 10043-35-3	100%

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 : 09/09/2021

Other information : None.

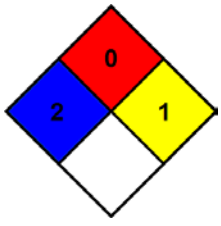
Full text of H- and EUH-statements: see section 16:

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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