

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/22/2024

Reviewed on 11/22/2024

1 Identification

- **Product identifier**
- **Trade name:** Boric acid
- **Article number:** 15166
- **CAS Number:**
10043-35-3
- **EC number:**
233-139-2
- **Index number:**
005-007-00-2
- **Application of the substance / the mixture:** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de
- **Information department:** Security Department Phone: +49 6221 13840-35
- **Emergency telephone number:**
Emergency medical information in case of poisoning
Poison Information Center Mainz-Tel: +49 (0) 6131 19240
(Advice in German and English)



2 Hazard(s) identification

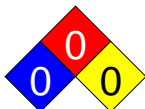
- **Classification of the substance or mixture**



GHS08

Toxic to Reproduction 1B H360 May damage fertility or the unborn child.

- **Label elements**
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:** GHS08
- **Signal word:** Danger
- **Hazard statements:**
May damage fertility or the unborn child.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

HEALTH	1	Health = *1
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

· Other hazards

· Results of PBT and vPvB assessment:

- **PBT:** PBT - Assessment not available.
- **vPvB:** vPvB - Assessment not available.

*

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**
10043-35-3 boric acid
- **Identification number(s):**
- **EC number:** 233-139-2
- **Index number:** 005-007-00-2
- **Description:**
- **Empirical formula:** $H_3B O_3$
- **MW:** 61.8

4 First-aid measures

- **Description of first aid measures**
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes with running water. Remove existing contact lenses, if possible, and continue rinsing. Consult an ophthalmologist immediately.
- **After swallowing:**
Rinse out mouth. Call a doctor immediately.
Do not induce vomiting!
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 CO_2 extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
Formation of toxic pyrolysis products possible in case of fire
In case of fire, the following can be released:
Hydrogen
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**
Collect contaminated fire fighting water separately. It must not enter the sewage system.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Ensure adequate ventilation
 - Wear protective clothing.
 - Avoid formation of dust.
 - Avoid contact with eyes and skin.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up**
 - Dispose contaminated material as waste according to section 13.
 - Pick up mechanically.
- **Protective Action Criteria for Chemicals**
 - **PAC-1:** 6 mg/m³
 - **PAC-2:** 23 mg/m³
 - **PAC-3:** 830 mg/m³
- **Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling:**
 - Avoid contact with eyes and skin.
 - Open and handle receptacle with care.
 - Prevent formation of dust.
- **Information about protection against explosions and fires:** The product is not flammable.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**
 - Do not store together with oxidizing materials.
 - Store away from reducing agents.
- **Further information about storage conditions:**
 - Store under lock and key and with access restricted to technical experts or their assistants only.
 - Store container tightly closed and dry.
- **Specific end use(s):** No further relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace:

10043-35-3 boric acid (80-100%)

TLV	Short-term value: 6* mg/m ³
	Long-term value: 2* mg/m ³
	*as inhalable fraction, A4

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Additional information about design of technical systems:** No further data; see section 7.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Store protective clothing separately.

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*Avoid contact with the eyes and skin.**Wash hands before breaks and at the end of work.***· Breathing equipment:***Short term filter device:**Filter P3***· Protection of hands:***The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.**Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation***· Material of gloves:***The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.***· Penetration time of glove material:***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.***· For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:***Natural rubber, NR**Nitrile rubber, NBR***· Eye protection:** *Safety glasses***· Body protection:** *Protective work clothing*

9 Physical and chemical properties

· Information on basic physical and chemical properties**· General Information:****· Color:***White***· Odor:***Odorless***· Odor threshold:***No information available***· Melting point/Melting range:***No information available***· Boiling point/Boiling range:***No information available***· Flammability (solid, gaseous):***Product is not flammable.***· Explosion limits:****· Lower:***No information available***· Upper:***No information available***· Flash point:***No information available***· Decomposition temperature:***No information available***· pH-value:***3.8-4.8***· Viscosity:****· Kinematic viscosity:***No information available***· Dynamic viscosity:***No information available***· Solubility in / Miscibility with:****· Water at 20 °C (68 °F):***~50 g/l***· Partition coefficient (n-octanol/water):***No information available***· Vapor pressure:***No information available***· Vapor pressure:****· Density at 20 °C (68 °F):***1.44 g/cm³ (12.0168 lbs/gal)***· Relative density:***No information available***· Other information***Further physicochemical data are not available.***· Appearance:****· Form:***Crystalline powder*

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- **Important information on protection of health and environment, and on safety:**
- **Danger of explosion:** no information available
- **Molecular weight** 61.8 g/mol

10 Stability and reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** reactions with strong reducing agents
- **Conditions to avoid:**
High temperatures
Moisture
- **Incompatible materials:**
Avoid contact with:
Reducing agents
strong bases
metals
- **Hazardous decomposition products:** In case of fire: see section 5

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:**

Oral	LD50	2,660 mg/kg (rat)
	LC50/96h	50-100 mg/l (fish)
- **Reproductive toxicity:** May damage fertility or the unborn child.
- **Other information (about experimental toxicology)**
The classification of BORIC ACID as toxic to reproduction category 1B, H360-FD (May damage fertility or the unborn child)
according to Regulation (EC) No 1272/2008 (CLP Regulation) and the inclusion in Annex VI, part 3, Table 3.1 (list of harmonised classification and labelling of hazardous substances) shows:
BORIC ACID meets the criteria for classification as toxic for reproduction in accordance with Article 57(c) of REACH.
(ECHA SVHC Support Document - BORIC ACID)
Supplementary Information on human health effects concerning Boric acid: SVHC SUPPORT DOCUMENT - BORIC ACID, ANNEX 1
- **Additional toxicological information:**
 - **Carcinogenic categories**
 - **IARC (International Agency for Research on Cancer)** Substance is not listed.
 - **NTP (National Toxicology Program)** Substance is not listed.
 - **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.

12 Ecological information

- **Toxicity:**
- **Aquatic toxicity:**

EC50/48h	113 mg/l (Daphnia magna)
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- **Persistence and degradability:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.

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- **Mobility in soil:** No further relevant information available.
 - **Results of PBT and vPvB assessment:**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
 - **Other adverse effects:**
 - **Additional ecological information:**
 - **General notes:**
- Do not allow product to reach ground water, water course or sewage system.
Water hazard class 1 (Assessment by list): slightly hazardous for water

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:**
- Dispose of in accordance with official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:**
- Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|--|
| · UN-Number | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | Void |
| · Environmental hazards | |
| · Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | Void |

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** ACTIVE
- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65** Substance is not listed.

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- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenicity categories**
- **EPA (Environmental Protection Agency) I (oral)**
- **TLV (Threshold Limit Value) A4**
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements**
The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS08
- **Signal word** Danger
- **Hazard statements**
May damage fertility or the unborn child.
- **Precautionary statements**
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/protective clothing/eye protection/face protection.
IF exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
- **National regulations:**
- **Information about limitation of use:**
Employment restrictions concerning pregnant and lactating women must be observed.
Employment restrictions concerning women of child-bearing age must be observed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product Safety Department
- **Contact:** +49 6221 13840-35
- **Date of preparation / last revision** 11/22/2024 / -
- **Abbreviations and acronyms:**
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
PBT: persistent, bioaccumulative, toxic substance (REACH)
vPvB: very persistent, very bioaccumulative substance (REACH)
REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
CLP: Regulation on classification, labelling and packaging of substances and mixtures
bw: body weight
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Toxic to Reproduction 1B: Reproductive toxicity – Category 1B