

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing date 21.11.2024

Version number 8

Revision: 21.11.2024

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

· **1.1 Product identifier**

· **Trade name:** Boric acid



· **Article number:** 15165

· **CAS Number:**

10043-35-3

· **EC number:**

233-139-2

· **Index number:**

005-007-00-2

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **Application of the substance / the mixture:** Laboratory chemicals

· **1.3 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

· **1.4 Emergency telephone number:**

Emergency medical information in case of poisoning

Poison Information Centre Mainz-Tel: +49 (0) 6131 19240

(Counselling in German and English)

**SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008:**



GHS08

Repr. 1B H360 May damage fertility or the unborn child.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008:**

The substance is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms:** GHS08

· **Signal word:** Danger

· **Hazard statements:**

H360 May damage fertility or 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/hearing protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment:**

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

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- **vPvB:** vPvB - Assessment not available.
- **Determination of endocrine-disrupting properties** No further relevant information available.

**SECTION 3: Composition/information on ingredients**

- **3.1 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

· **SVHC**

10043-35-3	boric acid
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**SECTION 4: First aid measures**

- **4.1 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 contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.
- **After swallowing:**  
Rinse out mouth. Call a doctor immediately.  
Do not induce vomiting!
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**SECTION 5: Firefighting measures**

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
 $CO_2$ , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 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 formed, but not limited to:  
Hydrogen
- **5.3 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.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation  
Wear protective clothing.

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*Avoid formation of dust.**Avoid contact with eyes and skin.*

- **6.2 Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.*

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

*Dispose contaminated material as waste according to section 13.**Pick up mechanically.*

- **6.4 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.*

### SECTION 7: Handling and storage

- **7.1 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*

- **7.2 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:**

*Store away from oxidising agents.**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 containers tightly closed and dry.*

- **7.3 Specific end use(s):** *No further relevant information available.*

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**

- **Components with limit values that require monitoring at the workplace:** *Not required.*

- **Additional information:** *The lists that were valid during the creation were used as basis.*

- **8.2 Exposure controls**

- **Appropriate engineering controls:** *No further data; see section 7.*

- **Individual protection measures, such as personal protective equipment:**

- **General protective and hygienic measures:**

*Keep away from foodstuffs, beverages and feed.**Immediately remove all soiled and contaminated clothing**Wash hands before breaks and at the end of work.**Store protective clothing separately.**Avoid contact with the eyes and skin.*

- **Breathing equipment:**

*Short term filter device:**Filter P3.*

- **Hand protection:**

*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.*

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- **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/face protection:** Safety glasses
- **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information:

- |  |                           |
|--|---------------------------|
| · <b>Physical state:</b>   | Solid.                    |
| · <b>Colour:</b>   | White                     |
| · <b>Odour:</b>  | Odourless                 |
| · <b>Odour threshold:</b>  | No information available  |
| · <b>Melting point/freezing point:</b>                             | No information available  |
| · <b>Boiling point or initial boiling point and boiling range:</b> | No information available  |
| · <b>Flammability:</b>   | Product is not flammable. |
| · <b>Lower and upper explosion limit:</b>                          |                           |
| · <b>Lower:</b>  | No information available  |
| · <b>Upper:</b>  | No information available  |
| · <b>Flash point:</b>  | No information available  |
| · <b>Decomposition temperature:</b>                                | No information available  |
| · <b>pH:</b>   | 3.8-4.8                   |
| · <b>Viscosity:</b>  |                           |
| · <b>Kinematic viscosity:</b>                                      | No information available  |
| · <b>Dynamic viscosity:</b>  | No information available  |
| · <b>Solubility:</b>   |                           |
| · <b>Water at 20 °C:</b>   | ~50 g/l                   |
| · <b>Partition coefficient n-octanol/water (log value):</b>        | No information available  |
| · <b>Vapour pressure:</b>  | No information available  |
| · <b>Density and/or relative density:</b>                          |                           |
| · <b>Density at 20 °C:</b>   | 1.44 g/cm <sup>3</sup>    |
| · <b>Relative density:</b>   | No information available  |
| · <b>Particle characteristics</b>                                  | No information available  |

#### · 9.2 Other information

- |  |  |
|--|--|
| · <b>Appearance:</b>   | Further physico-chemical data are not available. |
| · <b>Form:</b>   | Crystalline powder                               |
| · <b>Important information on protection of health and environment, and on safety:</b> |  |
| · <b>Explosive properties:</b>   | no information available                         |
| · <b>Molecular weight</b>  | 61.8 g/mol                                       |

### SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:** reactions with strong reducing agents
- **10.4 Conditions to avoid:**  
High temperatures

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Moisture

- **10.5 Incompatible materials:**

Avoid contact with:

Reducing agents

strong bases

Metals

- **10.6 Hazardous decomposition products:** In case of fire: see section 5

**SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**

- **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)

- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.

- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.

- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.

- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.

- **Carcinogenicity:** Based on available data, the classification criteria are not met.

- **Reproductive toxicity:** May damage fertility or the unborn child.

- **STOT-single exposure:** Based on available data, the classification criteria are not met.

- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.

- **Aspiration hazard:** Based on available data, the classification criteria are not met.

- **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 (GB 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 UK REACH.

(ECHA SVHC Support Document - BORIC ACID)

Supplementary Information on human health effects concerning Boric acid: SVHC SUPPORT DOCUMENT - BORIC ACID, ANNEX 1

- **11.2 Information on other hazards:**

- **Endocrine disrupting properties:** No relevant information available

**SECTION 12: Ecological information**

- **12.1 Toxicity:**

- **Aquatic toxicity:**

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

- **12.3 Bioaccumulative potential:** No further relevant information available.

- **12.4 Mobility in soil:** No further relevant information available.

- **12.5 Results of PBT and vPvB assessment:**

- **PBT:** PBT - assessment not available.

- **vPvB:** vPvB - assessment not available.

- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.

- **12.7 Other adverse effects:**

- **Additional ecological information:**

- **General notes:**

Do not allow product to reach ground water, water course or sewage system.

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Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.

**SECTION 13: Disposal considerations**

- **13.1 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.

**SECTION 14: Transport information**

- |  |  |
|--|--|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, ADN, IMDG, IATA</b>                        | Void   |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, ADN, IMDG, IATA</b>                       | Void   |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class:</b> | Void   |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                      | Void   |
| · <b>14.5 Environmental hazards</b><br>· <b>Marine pollutant:</b>                            | No   |
| · <b>14.6 Special precautions for user</b>   | Not applicable.                                      |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b>                        | Not applicable.                                      |
| · <b>Transport/Additional information:</b>   | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>  | Void   |

**SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 30, 75
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.

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- **REGULATION (EU) 2019/1148**
  - **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
Substance is not listed.
  - **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
  - **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
  - **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
Substance is not listed.
  - **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.
  - **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.
  - **Substances of very high concern (SVHC) according to UK REACH**
- |            |            |
|------------|------------|
| 10043-35-3 | boric acid |
|------------|------------|
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 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 previous version:** 03.11.2017
- **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*  
*SVHC: Substance of Very High Concern (UK REACH)*  
*PBT: persistent, bioaccumulative, toxic substance (UK REACH)*  
*vPvB: very persistent, very bioaccumulative substance (UK REACH)*  
*UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*  
*GB 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*  
*IATA: International Air Transport Association*  
*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Repr. 1B: Reproductive toxicity – Category 1B*

GB