

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.11.2011

Version number 1

Revision: 08.09.2011

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**
- **Application of the substance / the preparation** 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:** Product Safety department Tel.: +49 6221 13840-35
- **1.4. Emergency telephone number:** +49 6131 19240 (university hospital Mainz)

SERVA
Electrophoresis

2 Hazards identification

- **2.1. Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08

Repr. 1B H360FD May damage fertility. May damage the unborn child.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



T; Toxic

Repr. Cat. 2

R60-61: May impair fertility. May cause harm to the unborn child.

- **Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

- **2.2. Label elements**

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

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

- **Hazard pictograms** GHS08

- **Signal word** Danger

- **Hazard statements**

H360FD May damage fertility. May damage the unborn child.

- **Precautionary statements**

P201 Obtain special instructions before use.

P281 Use personal protective equipment as required.

P202 Do not handle until all safety precautions have been read and understood.

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.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.11.2011

Version number 1

Revision: 08.09.2011

Trade name: Boric acid

(Contd. of page 1)

- **2.3. Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

3 Composition/information on ingredients

- **3.1. 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

· **SVHC**

10043-35-3 | boric acid

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** Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.
- **Information for doctor**
- **4.2. Most important symptoms and effects, both acute and delayed**
Nausea
Gastric or intestinal disorders.
Cramp
- **4.3. Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1. Extinguishing media**
- **Suitable extinguishing agents**
CO₂, 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** No further relevant information available.
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2. Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3. Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
- **6.4. Reference to other sections**
See Section 8 for information on personal protection equipment.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.11.2011

Version number 1

Revision: 08.09.2011

Trade name: Boric acid

See Section 13 for disposal information.

(Contd. of page 2)

7 Handling and storage

- **Handling**
- **7.1. Precautions for safe handling**
 - Ensure good ventilation/exhaustion at the workplace.
 - 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:** Do not store together with oxidizing materials.
- **Further information about storage conditions:**
 - Store under lock and key and with access restricted to technical experts or their assistants only.
 - Store in cool, dry conditions in well sealed receptacles.
- **7.3. Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **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**
- **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.
- **Breathing equipment:**
 - Short term filter device:
 - Filter P3.
- **Protection of hands:**
 - Protective gloves.
 - 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

(Contd. on page 4)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.11.2011

Version number 1

Revision: 08.09.2011

Trade name: Boric acid

(Contd. of page 3)

· **Body protection:** Protective work clothing.

9 Physical and chemical properties

· 9.1. Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Crystalline

Colour: White

· Odour: Odourless

· pH-value (20 g/l) at 20°C: 3.8 - 4.8

· Change in condition

Melting point/Melting range: 176 - 180°C

Boiling point/Boiling range: undetermined

· Flash point: Not applicable

· Flammability (solid, gaseous) Product is not flammable.

· Danger of explosion: Product does not present an explosion hazard.

· Vapour pressure at 20°C: 2.7 hPa

· Density at 20°C: 1.44 g/cm³

· Bulk density at 20°C: 400 - 600 kg/m³

· Solubility in / Miscibility with

Water at 20°C: 50 g/l

· Segregation coefficient (n-octanol/water) at 25°C: 0.757 log POW

· 9.2. Other information There are no more data available.

10 Stability and reactivity

· 10.1. Reactivity No further relevant informations available

· 10.2. Chemical stability

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3. Possibility of hazardous reactions Explosive reaction with acetic anhydride.

· 10.4. Conditions to avoid No further relevant information available.

· 10.5. Incompatible materials: No further relevant information available.

· 10.6. Hazardous decomposition products: Metaboric acid

11 Toxicological information

· 11.1. Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

Oral	LD50	2660 mg/kg (rat)
	LC50/96h	5600 mg/l (Fish)

· Primary irritant effect:

· on the skin: No irritant effect.

· on the eye: No irritating effect.

· Sensitization: No sensitizing effects known.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

NOAEL (rat, mouse, dog; oral) (male and female reproductive toxicity): 17,5 mg Boron / kg bodyweight / day (ECHA 2008a).

NOAEL (rat, rabbit, mouse; oral) (developmental toxicity): 9,6 mg Boron / kg bodyweight / day (ECHA

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.11.2011

Version number 1

Revision: 08.09.2011

Trade name: Boric acid2008a)
Repr. 1B

(Contd. of page 4)

12 Ecological information· **12.1. Toxicity**· **Acquatic toxicity:**EC50/48h | 658 - 875 mg/l (*Daphnia magna*)· **12.2. Persistence and degradability** No further relevant information available.· **Behaviour in environmental systems:**· **12.3. Bioaccumulative potential**

Due to the distribution coefficient n-octanol/water an accumulation in organisms is not expected.

· **12.4. Mobility in soil** No further relevant information available.· **Additional ecological information:**· **General notes:**

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

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5. Results of PBT and vPvB assessment**· **PBT:** PBT - assessment not available.· **vPvB:** vPvB - assessment not available.· **12.6. Other adverse effects** No further relevant information available.**13 Disposal considerations**· **13.1. Waste treatment methods**· **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleansing agent:** Water, if necessary with cleansing agents.**14 Transport information**· **14.1. UN-Number**· **ADR, ADN, IMDG, IATA** Void· **14.2. UN proper shipping name**· **ADR, ADN, IMDG, IATA** Void· **14.3. Transport hazard class(es)**· **ADR, ADN, IMDG, IATA**· **Class** Void· **14.4. Packing group**· **ADR, IMDG, IATA** Void· **14.5. Environmental hazards:**· **Marine pollutant:** No· **14.6. Special precautions for user** Not applicable.· **14.7. 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.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.11.2011

Version number 1

Revision: 08.09.2011

Trade name: Boric acid

(Contd. of page 5)

· UN "Model Regulation":

-

15 Regulatory information

- **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **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.
- **15.2. 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 MSDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**
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
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
GHS: Globally Harmonized 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
- *** Data compared to the previous version altered.**

GB