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

Printing date 22.11.2024 *Version number 5* *Revision: 22.11.2024*

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

· **1.1 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
· **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_3BO_3
· ***MW:*** *61.8*

· ***SVHC***	
10043-35-3	*boric acid*

*
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:***
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 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
Store protective clothing separately.
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.
· ***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 trough 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:**	
· **Physical state:**	*Solid.*
· **Colour:**	*White*
· **Odour:**	*Odourless*
· **Odour threshold:**	*No information available*
· **Melting point/freezing point:**	*No information available*
· **Boiling point or initial boiling point and boiling range:**	*No information available*
· **Flammability:**	*Product is not flammable.*
· **Lower and upper explosion limit:**	
· **Lower:**	*No information available*
· **Upper:**	*No information available*
· **Flash point:**	*No information available*
· **Decomposition temperature:**	*No information available*
· **pH:**	*3.8-4.8*
· **Viscosity:**	
· **Kinematic viscosity:**	*No information available*
· **Dynamic viscosity:**	*No information available*
· **Solubility:**	
· **Water at 20 °C:**	*~50 g/l*
· **Partition coefficient n-octanol/water (log value):**	*No information available*
· **Vapour pressure:**	*No information available*
· **Density and/or relative density:**	
· **Density at 20 °C:**	*1.44 g/cm³*
· **Relative density:**	*No information available*
· **Particle characteristics**	*No information available*
· **9.2 Other information**	*Further physico-chemical data are not available.*
· **Appearance:**	
· **Form:**	*Crystalline powder*
· **Important information on protection of health and environment, and on safety:**	
· **Explosive properties:**	*no information available*
· **Molecular weight**	*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)*

· ***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

· **14.1 UN number or ID 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 Maritime transport in bulk according to IMO instruments**	*Not applicable.*
· **Transport/Additional information:**	*Not dangerous according to the above specifications.*
· **UN "Model Regulation":**	*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:*** *02.12.2022*
· ***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 (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