SAFETY DATA SHEET

Buffer solution pH 9

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

1.1 Product identifier

Product name : Buffer solution pH 9

Other means of identification : Not available.

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

Product use : Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Manufacturer
Metrohm AG
Ionenstrasse
9100 Herisau
Switzerland
Tel.: +41 (0)71 353 85 85
Fax: +41 (0)71 353 89 01
E-Mail: info@metrohm.com
Web: www.metrohm.com

Supplier
Metrohm Ireland Ltd
Cherrywood Business Park
Building 10
Block G
Loughlinstown
Co. Dublin
D18 T3Y1
Ireland

Tel.: 041 450 9616
E-Mail: info@metrohm.co.uk

e-mail address of person responsible for this SDS : datasheet@metrohm.com

1.4 Emergency telephone number

Supplier

Telephone number : + 49 (0)6132-84463 (24 h, GBK GmbH)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Repr. 1B, H360FD

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

SECTION 2: Hazards identification

Hazard pictograms :

Signal word : Danger

Hazard statements : H360FD - May damage fertility. May damage the unborn child.

Precautionary statements

Prevention : P201 - Obtain special instructions before use.
P280 - Wear protective gloves, protective clothing and eye or face protection.

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

Storage : Not applicable.

Disposal : Not applicable.

Hazardous ingredients : disodium tetraborate decahydrate

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Restricted to professional users.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
disodium tetraborate decahydrate	REACH #: 01-2119490790-32 EC: 215-540-4 CAS: 1303-96-4 Index: 005-011-00-4	<1	Eye Irrit. 2, H319 Repr. 1B, H360FD	[1] [2] [3]
boric acid	REACH #: 01-2119486683-25 EC: 233-139-2 CAS: 10043-35-3 Index: 005-007-00-2	<0.3	Repr. 1B, H360FD **See Section 16 for the full text of the H statements declared above.**	[1] [2] [3]

Product/ingredient name	Specific Conc. Limits, M-factors and ATEs
disodium tetraborate decahydrate	-
boric acid	-

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

SECTION 3: Composition/information on ingredients

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] Substance with carcinogenic, mutagenic or reproductive toxicity properties

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

SECTION 4: First aid measures

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO_2, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products : No specific data.

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

Additional information (Explosibility) : Not considered to be a product presenting a risk of explosion.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

SECTION 6: Accidental release measures

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store between the following temperatures: 15 to 25°C (59 to 77°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Section 7. Handling and storage: The information in this section contains generic advice and guidance.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
disodium tetraborate decahydrate	**NAOSH (Ireland, 4/2024) [borate compounds inorganic]** Repr 1B. Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 2 mg/m³.
boric acid	**NAOSH (Ireland, 4/2024) [borate compounds inorganic]** Repr 1B. Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV 8 hours: 2 mg/m³.

Biological exposure indices

None known.

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

DNEL/DMEL Summary : Not applicable.

PNECs

PNEC Summary : Not applicable.

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Wear safety glasses with side protection in accordance with EN 166.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
Recommended: Wear suitable gloves tested to EN374.
> 8 hours (breakthrough time): nitrile rubber (thickness ≥0.11 mm)

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
Recommended: Combination filtering device (DIN EN 14387). Filter type: A-P3.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state	:	Liquid.
Colour	:	Colourless.
Odour	:	Odourless.
Odour threshold	:	Not available.
pH	:	9
Melting point/freezing point	:	Not available.
Boiling point or initial boiling point and boiling range	:	103.4 to 103.8°C
Flash point	:	Not applicable.
Flammability	:	Not available.
Lower and upper explosion limit	:	Not available.
Vapour pressure	:	2.3 kPa
Relative vapour density	:	Not available.
Relative density	:	Not available.
Density	:	1.0023 g/cm³ [20°C]
Solubility in water	:	Not available.
Partition coefficient n-octanol/ water (log Pow)	:	Not applicable.
Auto-ignition temperature	:	Not applicable.
Decomposition temperature	:	Not available.
Viscosity	:	Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C): Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Oxidising properties : Not available.

Explosive properties : Not considered to be a product presenting a risk of explosion.

9.2.2 Other safety characteristics

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Keep away from heat, sparks and flame.

10.5 Incompatible materials : No specific data.

SECTION 10: Stability and reactivity

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result and Species	Dose [Exposure]	Remarks
disodium tetraborate decahydrate	Oral - Rat - Male, Female - LD50 [OECD 401]	>2500 mg/kg	-
	Oral - Rabbit - Male, Female - LD50 [OECD 403]	>2000 mg/kg	read-across, CAS: 12179-04-3
	Inhalation - Rat - Male, Female - LC50 Dusts and mists	>2.12 mg/l [4 hours]	-
boric acid	Oral - Rat - Male, Female - LD50 [ECHA]	3450 mg/kg	-
	Oral - Rabbit - Male, Female - LD50 [OECD 403]	>2000 mg/kg	-
	Inhalation - Rat - Male, Female - LC50 Dusts and mists	>2.12 mg/l [4 hours]	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
boric acid	3450	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result and Species	Exposure	Remarks
disodium tetraborate decahydrate	Skin - Rabbit - Non-irritating to the skin.	Duration of treatment/ exposure: 24 hours	read-across, CAS: 12179-04-3
	Eyes - Rabbit - Irritant - [OECD 405]	-	-
boric acid	Skin - Rabbit - Non-irritating to the skin. - [ECHA]	Duration of treatment/ exposure: 24 hours	-
	Eyes - Rabbit - Non-irritating to the eyes. - [OECD 405]	Duration of treatment/ exposure: 24 hours	-

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Eyes : Based on available data, the classification criteria are not met.

Respiratory : Not available.

Respiratory or skin sensitization

SECTION 11: Toxicological information

Product/ingredient name	Route of exposure and Species	Result	Remarks
disodium tetraborate decahydrate	skin - Guinea pig [OECD 406]	Not sensitizing	-
boric acid	skin - Guinea pig [OECD 406]	Not sensitizing	-

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.

Respiratory : Not available.

Mutagenicity

Product/ingredient name	Result	Experiment	Remarks
disodium tetraborate decahydrate	Negative	Mammalian-Animal - Metabolic activation: with and without	-
	Negative [Ames, OECD 471]	Bacteria - Metabolic activation: with and without	S. typhimurium
	Negative [OECD 476]	In vitro - Mammalian-Animal - Metabolic activation: with and without	-
	Negative [OECD 474]	Mammalian-Animal - Oral	-
boric acid	Negative	Mammalian-Animal - Metabolic activation: with and without	-
	Negative [Ames, OECD 471]	Bacteria - Metabolic activation: with and without	S. typhimurium
	Negative [OECD 476]	In vitro - Mammalian-Animal - Metabolic activation: with and without	-
	Negative [OECD 482]	Mammalian-Animal - Metabolic activation: with and without	-
	Negative [OECD 474, Micronucleus-test]	Mammalian-Animal - Oral	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : No known significant effects or critical hazards.

Reproductive toxicity

Conclusion/Summary : May damage fertility. May damage the unborn child.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

SECTION 11: Toxicological information

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.

Inhalation : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result and Species	Dose [Exposure]	Remarks
disodium tetraborate decahydrate	Oral - Chronic - Rat - Male, Female - -	100 mg/kg	-
	Oral - Chronic - Rat - Male, Female - -	334 mg/kg	-
boric acid	Oral - Chronic - Rat - Male, Female - -	17.5 mg/kg	-
	Oral - Chronic - Rat - Male, Female - -	58.5 mg/kg	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : May damage fertility. May damage the unborn child.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

SECTION 11: Toxicological information

Not available.

Conclusion/Summary [Human Health] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result [Exposure]	Species	Remarks
disodium tetraborate decahydrate	Acute - EC50 1085 to 1402 mg/l [48 hours]	Daphnia - *Daphnia magna*	-
	Acute - EC50 158 mg/l [96 hours]	Algae - *Desmodesmus subspicatus*	-
boric acid	Acute - LC50 79.7 mg/l - Static [96 hours] [US-EPA]	Fish - *Pimephales promelas*	-
	Acute - EC50 52.4 mg/l [74.5 hours] [OECD 201]	Algae - *Raphidocelis subcapitata*	-
	Acute - EC50 133 mg/l [48 hours]	Daphnia - *Daphnia magna*	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

12.2 Persistence and degradability

Conclusion/Summary : There are no data available on the mixture itself.

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
boric acid	-1.09	-	Low

12.4 Mobility in soil

Soil/water partition coefficient

Not available.

Mobility : Not available.

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
disodium tetraborate decahydrate	No	No	No	No	No	No	No
boric acid	No	No	No	No	No	No	No

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

SECTION 12: Ecological information

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
disodium tetraborate decahydrate	No	No	No	No	No	No	No
boric acid	No	No	No	No	No	No	No

Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
disodium tetraborate decahydrate	No	No	No	No	No	No	No
boric acid	No	No	No	No	No	No	No

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Environment] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EWC, specific to the industry and process.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible.

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
Label				
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	Marine Pollutant: No	No.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not intended.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Ingredient name	Intrinsic property	Status	Reference number	Date of revision
disodium tetraborate, anhydrous	Toxic to reproduction	Candidate	ED/30/2010	7/1/2015
boric acid	-	Candidate	ED/30/2010	7/1/2015

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Buffer solution pH 9	≥90	3 30
disodium tetraborate decahydrate	<1	30

Labelling : Restricted to professional users.

Other EU regulations

Explosive precursors : Not applicable.

(EC) No 273/2004 on drug precursors

Not listed.

(EC) No 111/2005 Trade between the Union and third countries in drug precursors

Not listed.

Ozone depleting substances (EU 2024/590)

Not listed.

SECTION 15: Regulatory information

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

There are no known additional national regulations relevant to the SDS.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

OECD Comprehensive Global PFAS Database

Not listed.

Inventory list

Australia	:	All components are listed or exempted.
Canada	:	All components are listed or exempted.
China	:	All components are listed or exempted.
Eurasian Economic Union	:	**Russian Federation inventory**: All components are listed or exempted.
Japan	:	**Japan inventory (CSCL):** All components are listed or exempted. **Japan inventory (ISHL):** All components are listed or exempted.
New Zealand	:	All components are listed or exempted.
Philippines	:	All components are listed or exempted.
Republic of Korea	:	All components are listed or exempted.
Taiwan	:	All components are listed or exempted.
Thailand	:	All components are listed or exempted.
United States	:	All components are active or exempted.
Viet Nam	:	All components are listed or exempted.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

This Safety Data Sheet is prepared in accordance with Annex II to Regulation (EC) No 1907/2006, as amended by Commission Regulation (EU) 2020/878.

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
EWC = European Waste Catalogue
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Repr. 1B, H360FD	Calculation method

Full text of abbreviated H statements

H319	Causes serious eye irritation.
H360FD	May damage fertility. May damage the unborn child.

Full text of classifications [CLP/GHS]

Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B

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