Sodium Borate Buffer Solution

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 05/04/2015 Version: 1.0

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

1.1. Product identifier

Product form : Mixture

Product name : Sodium Borate Buffer Solution

Product code : LC22962

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

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Repr. 1B H360

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :

GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : H360 - May damage fertility or the unborn child

Precautionary statements (GHS-US) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P280 - Wear protective gloves, eye protection
P308+P313 - If exposed or concerned: Get medical advice/attention
P405 - Store locked up
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Water	(CAS No) 7732-18-5	99.74	Not classified
Sodium Tetraborate, Decahydrate	(CAS No) 1303-96-4	0.25	Repr. 1B, H360
Sodium Hydroxide	(CAS No) 1310-73-2	0.01	Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : May damage fertility or the unborn child.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Gloves.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Hygiene measures : Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

Incompatible products : Strong oxidizers. Strong acids.

Incompatible materials : incompatible materials. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium Borate Buffer Solution		
ACGIH	Not applicable	
OSHA	Not applicable	

Sodium Tetraborate, Decahydrate (1303-96-4)		
ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
OSHA	Not applicable	

Water (7732-18-5)		
ACGIH	Not applicable	
OSHA	Not applicable	

Sodium Hydroxide (1310-73-2)		
OSHA	OSHA PEL (TWA) (mg/m³)	2 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Colorless

Odor : None.

Odor threshold : No data available

pH : No data available

Melting point : No data available

Freezing point : No data available

Boiling point : No data available

Flash point : No data available

Relative evaporation rate (butyl acetate=1) : No data available

Flammability (solid, gas) : No data available

Explosion limits : No data available

Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Relative vapor density at 20 °C	:	No data available
Solubility	:	Miscible with water. Water: Solubility in water of component(s) of the mixture : • Sodium Tetraborate, Decahydrate: 6.25 g/100ml • Sodium Hydroxide: 42 g/100ml
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Incompatible materials. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong oxidizers.

10.6. Hazardous decomposition products

boron.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	:	Skin and eye contact
Acute toxicity	:	Not classified

Sodium Tetraborate, Decahydrate (1303-96-4)	
LD50 oral rat	2660 mg/kg
LD50 dermal rabbit	10000 mg/kg
ATE US (oral)	2660.000 mg/kg body weight
ATE US (dermal)	10000.000 mg/kg body weight

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000.000 mg/kg body weight

Sodium Hydroxide (1310-73-2)	
LD50 dermal rabbit	1350 mg/kg (Rabbit; Literature)
ATE US (dermal)	1350.000 mg/kg body weight

Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitization	:	Not classified
Germ cell mutagenicity	:	Not classified

Carcinogenicity	:	Not classified
Reproductive toxicity	:	May damage fertility or the unborn child.
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential Adverse human health effects and symptoms	:	Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Sodium Tetraborate, Decahydrate (1303-96-4)	
EC50 Daphnia 1	1085 mg/l

Sodium Hydroxide (1310-73-2)	
LC50 fish 1	45.4 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Solution >=50%)
EC50 Daphnia 1	40.4 mg/l (48 h; Ceriodaphnia sp.; Nominal concentration)
LC50 fish 2	189 mg/l (48 h; Leuciscus idus)
TLM fish 1	99 mg/l (48 h; Lepomis macrochirus)
TLM fish 2	125 ppm (96 h; Gambusia affinis)

12.2. Persistence and degradability

Sodium Borate Buffer Solution	
Persistence and degradability	Not established.

Sodium Tetraborate, Decahydrate (1303-96-4)	
Persistence and degradability	Not established.

Water (7732-18-5)	
Persistence and degradability	Not established.

Sodium Hydroxide (1310-73-2)	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Sodium Borate Buffer Solution	
Bioaccumulative potential	Not established.

Sodium Tetraborate, Decahydrate (1303-96-4)	
Bioaccumulative potential	Not established.

Water (7732-18-5)	
Bioaccumulative potential	Not established.

Sodium Hydroxide (1310-73-2)	
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming	:	No known ecological damage caused by this product.
Other information	:	Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Sodium Borate Buffer Solution	
SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Sodium Hydroxide (1310-73-2)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

15.2. International regulations

CANADA

Sodium Borate Buffer Solution	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Sodium Tetraborate, Decahydrate (1303-96-4)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects

Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Sodium Hydroxide (1310-73-2)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class E - Corrosive Material

EU-Regulations

No additional information available

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

No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Not classified

National regulations

Sodium Tetraborate, Decahydrate (1303-96-4)
Listed on the Canadian IDL (Ingredient Disclosure List)

Water (7732-18-5)
Not listed on the Canadian IDL (Ingredient Disclosure List)

Sodium Hydroxide (1310-73-2)
Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

SECTION 16: Other information

Other information : None.

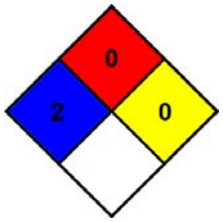
Full text of H-phrases: see section 16:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal) Category 4
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Repr. 1B	Reproductive toxicity Category 1B
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H360	May damage fertility or the unborn child
H402	Harmful to aquatic life

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal Protection : B

B - Safety glasses, Gloves

SDS US (GHS HazCom 2012)

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