



Buffer Solution pH 10.00

Safety Data Sheet

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

Date of issue: 12/09/2013

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Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : Buffer Solution pH 10.00
 Product code : 1.2270

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

NEUTRON PHARMACHEMICAL CO
 98, 9th Floor, Borjsaz Building, Azadi Ave, Tehran, Iran.
 T 021-66906732-3 - F 021-66581408
info@neutronpharmachemical.com -
www.neutronpharmachemical.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 125

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Reproductive toxicity Category 1B H360
 Full text of H statements : 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	%	GHS-US classification
Water	(CAS No) 7732-18-5	99.57	Not classified
Sodium Tetraborate, Decahydrate	(CAS No) 1303-96-4	0.38	Repr. 1B, H360
Sodium Hydroxide	(CAS No) 1310-73-2	0.05	Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

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Full text of hazard classes and H-statements : 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.

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Incompatible materials : incompatible materials. Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Sodium Tetraborate, Decahydrate (1303-96-4)		
ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
ACGIH	ACGIH STEL (mg/m ³)	6 mg/m ³
NIOSH	NIOSH REL (TWA) (mg/m ³)	5 mg/m ³

Water (7732-18-5)

Not applicable

Sodium Hydroxide (1310-73-2)

ACGIH	ACGIH Ceiling (mg/m ³)	2 mg/m ³ (Sodium hydroxide; USA; Momentary value; TLV - Adopted Value)
OSHA	OSHA PEL (TWA) (mg/m ³)	2 mg/m ³
IDLH	US IDLH (mg/m ³)	10 mg/m ³
NIOSH	NIOSH REL (ceiling) (mg/m ³)	2 mg/m ³

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Safety glasses. Gloves.



Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Respiratory protection not required in normal conditions.

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	: 10
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)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Solubility	: Miscible with water.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: 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)	
ATE US (dermal)	1350.000 mg/kg body weight

Skin corrosion/irritation	: Not classified pH: 10
Serious eye damage/irritation	: Not classified pH: 10
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

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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 (LC50; Other; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)

12.2. Persistence and degradability

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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

12.3. Bioaccumulative potential

Buffer Solution pH 10.00	
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	No bioaccumulation data available.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known effects from this product.
GWPmix comment : No known effects from 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

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SECTION 15: Regulatory information

15.1. US Federal regulations

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SARA Section 311/312 Hazard Classes	Delayed (chronic) health hazard
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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
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SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
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15.2. International regulations

CANADA

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WHMIS Classification	Class D Division 2 Subdivision A - Very toxic material causing other toxic effects
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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
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Water (7732-18-5)

WHMIS Classification	Uncontrolled product according to WHMIS classification criteria
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Sodium Hydroxide (1310-73-2)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification	Class E - Corrosive Material
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EU-Regulations

No additional information available

National regulations

Sodium Tetraborate, Decahydrate (1303-96-4)

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, developmental and/or reproductive harm

SECTION 16: Other information

Revision date : 12/20/2016

Other information : None.

Full text of H-phrases: see section 16:

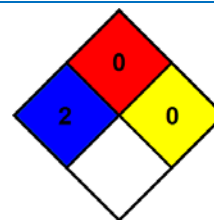
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H360	May damage fertility or the unborn child
H402	Harmful to aquatic life

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- 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

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