Buffer Solution pH 9.00

Safety Data Sheet

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

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SECTION 1: Identification

1.1. Identification

Product form : Mixtures

Product name : Buffer Solution pH 9.00

Product code : LC12440

1.2. Recommended use and restrictions on use

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

Recommended use : Laboratory chemicals

Restrictions on use : Not for food, drug or household use

1.3. Supplier

LabChem, Inc.
1010 Jackson's Pointe Ct.
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 +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Reproductive toxicity Category 1B H360 May damage fertility or the unborn child

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



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 eye protection, protective gloves.
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 which do not result in classification

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. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Water	(CAS-No.) 7732-18-5	99.27	Not classified
Potassium Chloride	(CAS-No.) 7447-40-7	0.37	Not classified
Boric Acid	(CAS-No.) 10043-35-3	0.31	Repr. 1B, H360

Name	Product identifier	%	GHS US classification
Sodium Hydroxide	(CAS-No.) 1310-73-2	0.05	Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

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 affected person 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 persists.

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

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : May damage fertility. May damage the unborn child.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Slight irritation.

Symptoms/effects after eye contact : May cause slight irritation.

Symptoms/effects after ingestion : Nausea. Vomiting.

Symptoms/effects upon intravenous administration : Not available.

Chronic symptoms : Affection of the renal tissue. Change in the haemogramme/blood composition.

4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) 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. Specific hazards arising from the chemical

Fire hazard : Not flammable.

Explosion hazard : Not applicable.

Reactivity in case of fire : None.

5.3. Special protective equipment and precautions for fire-fighters

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.

Other information : Not applicable.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Isolate from fire, if possible, without unnecessary risk.

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 exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : incompatible materials. Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Boric Acid (10043-35-3)		
ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
ACGIH	ACGIH Ceiling (mg/m³)	6 mg/m³

Water (7732-18-5)
Not applicable

Sodium Hydroxide (1310-73-2)		
ACGIH	ACGIH Ceiling (mg/m³)	2 mg/m³
NIOSH	NIOSH REL (ceiling) (mg/m³)	2 mg/m³

Potassium Chloride (7447-40-7)
Not applicable

8.2. Appropriate engineering controls

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

8.3. Individual protection measures/Personal protective equipment

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

Personal protective equipment symbol(s):



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
Appearance	:	Clear, colorless liquid.
Color	:	Colorless
Odor	:	None.
Odor threshold	:	No data available
pH	:	9
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	:	Soluble in water.
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosion limits	:	No data available
Explosive properties	:	Not applicable.
Oxidizing properties	:	None.

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

None.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids.

10.6. Hazardous decomposition products

boron. Hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Boric Acid (10043-35-3)	
LD50 oral rat	2660 mg/kg
LD50 dermal rabbit	2000 mg/kg

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

Potassium Chloride (7447-40-7)	
LD50 oral rat	2600 mg/kg
ATE US (oral)	2600 mg/kg body weight

Skin corrosion/irritation : Not classified
pH: 9
Serious eye damage/irritation : Not classified
pH: 9
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : May damage fertility or the unborn child.
STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact.
Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
Symptoms/effects : May damage fertility. May damage the unborn child.
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Slight irritation.
Symptoms/effects after eye contact : May cause slight irritation.
Symptoms/effects after ingestion : Nausea. Vomiting.
Symptoms/effects upon intravenous administration : Not available.
Chronic symptoms : Affection of the renal tissue. Change in the haemogramme/blood composition.

SECTION 12: Ecological information

12.1. Toxicity

Boric Acid (10043-35-3)	
LC50 fish 1	5600 mg/l Gambusia affinis
EC50 Daphnia 1	115 mg/l
EC50 Daphnia 2	658 – 875 mg/l

Sodium Hydroxide (1310-73-2)	
LC50 fish 1	45.4 mg/l (96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Solution >=50%)
EC50 Daphnia 1	40.4 mg/l (48 h, Ceriodaphnia sp., Experimental value, Nominal concentration)

Potassium Chloride (7447-40-7)	
EC50 Daphnia 1	825 mg/l

12.2. Persistence and degradability

Buffer Solution pH 9.00	
Persistence and degradability	Not established.

Boric Acid (10043-35-3)	
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.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

Potassium Chloride (7447-40-7)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Buffer Solution pH 9.00	
Bioaccumulative potential	Not established.

Boric Acid (10043-35-3)	
Log Pow	-0.757
Bioaccumulative potential	Not established.

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

Sodium Hydroxide (1310-73-2)	
Bioaccumulative potential	Not bioaccumulative.

Potassium Chloride (7447-40-7)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Sodium Hydroxide (1310-73-2)	
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. 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

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Buffer Solution pH 9.00	
SARA Section 311/312 Hazard Classes	Health hazard - Reproductive toxicity

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

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

Boric Acid (10043-35-3)
Listed on the Canadian DSL (Domestic Substances List)

Water (7732-18-5)
Listed on the Canadian DSL (Domestic Substances List)

Sodium Hydroxide (1310-73-2)
Listed on the Canadian DSL (Domestic Substances List)

Potassium Chloride (7447-40-7)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

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

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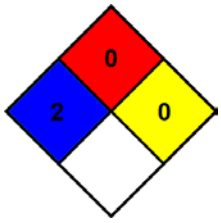
Revision date : 03/10/2020

Other information : None.

Full text of H-phrases: see section 16:

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 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.
NFPA fire hazard	:	0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
NFPA reactivity	:	0 - Material that in themselves are normally stable, even under fire conditions.



Hazard 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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