Buffer Solution pH 1.00

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 1.00
Product code : LC12180

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

Skin corrosion/irritation, Category 1A	H314	Causes severe skin burns and eye damage.

Full text of H-statements: see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger
Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage.
Precautionary statements (GHS US) : P260 - Do not breathe mist, spray, vapours.
P264 - Wash exposed skin thoroughly after handling.
P280 - Wear eye protection, protective gloves.
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER/doctor.
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to comply with local, state and federal regulations.
If inhaled: Remove person to fresh air and keep comfortable for breathing.

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, Deionized, ASTM Type II	CAS-No.: 7732-18-5	99.58	Not classified
Potassium Chloride	CAS-No.: 7447-40-7	0.37	Not classified
Hydrochloric Acid, 37% w/w	CAS-No.: 7647-01-0	0.05	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 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 you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER/doctor.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.

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 : Causes severe skin burns and eye damage.

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Caustic burns/corrosion of the skin.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Irritation of the gastric/intestinal mucosa.

Symptoms/effects upon intravenous administration : Not available.

Chronic symptoms : Affection/discolouration of the teeth. Dry skin. Inflammation/damage of the eye tissue. Irritation of the respiratory tract.

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 : Thermal decomposition generates : Corrosive vapours.

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 the 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 : Gloves. Safety glasses.

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 Section 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 vapour. Do not breathe mist, spray, vapours. Avoid contact during pregnancy/while nursing.

Hygiene measures : Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

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. silver nitrate. metals.

Incompatible materials : Sources of ignition. Direct sunlight.

Prohibitions on mixed storage : KEEP SUBSTANCE AWAY FROM: (strong) bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Buffer Solution pH 1.00

No additional information available

Potassium Chloride (7447-40-7)

No additional information available

Hydrochloric Acid, 37% w/w (7647-01-0)

USA - ACGIH - Occupational Exposure Limits

ACGIH Ceiling (mg/m³)	2.98 mg/m³
ACGIH Ceiling (ppm)	2 ppm

USA - OSHA - Occupational Exposure Limits

OSHA PEL C	7 mg/m³
	5 ppm

USA - IDLH - Occupational Exposure Limits

IDLH	50 ppm

USA - NIOSH - Occupational Exposure Limits

NIOSH REL C	7 mg/m³
	5 ppm

Water, Deionized, ASTM Type II (7732-18-5)

No additional information available

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. Chemical resistant apron. Face shield. Protective clothing.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or face shield

Skin and body protection:

Wear suitable protective clothing

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.
Colour	:	Colourless
Odour	:	Odourless
Odour threshold	:	No data available
pH	:	1 @ 25°C
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	Non flammable.
Vapour pressure	:	No data available
Relative vapour density at 20°C	:	No data available
Relative density	:	No data available
Density	:	1
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
Explosive limits	:	No data available
Explosive properties	:	Not applicable.
Oxidising properties	:	None.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

silver nitrate. Strong bases. metals.

10.6. Hazardous decomposition products

Chlorine. Thermal decomposition generates : Corrosive vapours.

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

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

Hydrochloric Acid, 37% w/w (7647-01-0)	
LD50 oral rat	700 mg/kg
LD50 dermal rabbit	5010 mg/kg
ATE US (oral)	700 mg/kg bodyweight
ATE US (dermal)	5010 mg/kg bodyweight

Water, Deionized, ASTM Type II (7732-18-5)	
LD50 oral rat	90000 mg/kg
ATE US (oral)	90000 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.
pH: 1 @ 25°C

Serious eye damage/irritation : Assumed to cause serious eye damage
pH: 1 @ 25°C

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified

Hydrochloric Acid, 37% w/w (7647-01-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Likely routes of exposure : Skin and eyes contact.
Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.
Symptoms/effects : Causes severe skin burns and eye damage.
Symptoms/effects after inhalation : May cause respiratory irritation.
Symptoms/effects after skin contact : Caustic burns/corrosion of the skin.

Symptoms/effects after eye contact	:	Causes serious eye damage.
Symptoms/effects after ingestion	:	Irritation of the gastric/intestinal mucosa.
Symptoms/effects upon intravenous administration	:	Not available.
Chronic symptoms	:	Affection/discolouration of the teeth. Dry skin. Inflammation/damage of the eye tissue. Irritation of the respiratory tract.

SECTION 12: Ecological information

12.1. Toxicity

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

Hydrochloric Acid, 37% w/w (7647-01-0)	
LC50 fish 1	282 mg/l (96 h, Gambusia affinis, Pure substance)
EC50 Daphnia 1	< 56 mg/l (72 h, Daphnia magna, Pure substance)

12.2. Persistence and degradability

Buffer Solution pH 1.00	
Persistence and degradability	Not established.

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

Hydrochloric Acid, 37% w/w (7647-01-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Water, Deionized, ASTM Type II (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Buffer Solution pH 1.00	
Bioaccumulative potential	Not established.

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

Hydrochloric Acid, 37% w/w (7647-01-0)	
Log Pow	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Water, Deionized, ASTM Type II (7732-18-5)	
Log Pow	-1.38
Bioaccumulative potential	Not established.

12.4. Mobility in soil

Hydrochloric Acid, 37% w/w (7647-01-0)	
Ecology - soil	No (test)data on mobility of the component(s) available. May be harmful to plant growth, blooming and fruit formation.

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

14.1. UN number

DOT NA No : UN1789

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Hydrochloric acid

Transport document description : UN1789 Hydrochloric acid, 8, III

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 8

Hazard labels (DOT) : 8

14.4. Packing group

Packing group (DOT) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1789

DOT Special Provisions (49 CFR 172.102)	:	A3 - For combination packagings, if glass inner packagings (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packagings. IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672). T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / (1 + a (tr - tf)) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP12 - This material is considered highly corrosive to steel.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	154
DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
DOT Packaging Bulk (49 CFR 173.xxx)	:	241
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	C - The material must be stowed ‘‘on deck only’’ on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	:	8 - Glass carboys not permitted on passenger vessels

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Buffer Solution pH 1.00	
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Hydrochloric Acid, 37% w/w	CAS-No. 7647-01-0	0.05%

Hydrochloric Acid, 37% w/w (7647-01-0)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 311/312 Hazard Classes	Health hazard - Acute toxicity (any route of exposure) Health hazard - Skin corrosion or Irritation Health hazard - Serious eye damage or eye irritation Health hazard - Specific target organ toxicity (single or repeated exposure)

15.2. International regulations

CANADA

Potassium Chloride (7447-40-7)

Listed on the Canadian DSL (Domestic Substances List)

Water, Deionized, ASTM Type II (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Water, Deionized, ASTM Type II (7732-18-5)

Listed on INSQ (Mexican National Inventory of Chemical Substances)

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

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

Revision date : 04/02/2025

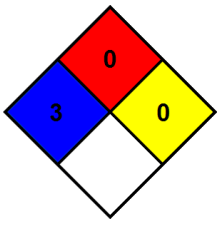
Other information : None.

Full text of H- and EUH-statements: see section 16	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H402	Harmful to aquatic life

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent 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 : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

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 : C - Safety glasses, Gloves, Synthetic apron

SDS US LabChem

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