Buffer Solution, pH 1.68

Safety Data Sheet

SECTION 1: Identification

1.1. Identification

Product name : Buffer Solution, pH 1.68
Product number : 30100424

1.2. Recommended use and restrictions on use

Recommended use : Laboratory chemicals

1.3. Supplier

Ohaus Instruments (Changzhou)co.,ltd
Building 22
538 West Hehai Road
Xinbei District, Changzhou,Jiangsu Province,213012
China
T 4008-217-188
pH@ohaus.com

1.4. Emergency telephone number

Emergency number : Emergency CONTACT (24-Hour-Number)
GBK/Infotrac ID114774 : (USA domestic) 1 800 535 5053 or international (001) 352 323 3500

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

The substance is not classified as hazardous according to the Globally Harmonized System (GHS).

2.2. GHS Label elements, including precautionary statements

Not regulated.

2.3. Other hazards which do not result in classification

There are no other hazards not otherwise classified that have been identified.

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	>99.3	
Potassium chloride	CAS-No.: 7447-40-7	<0.5	Eye Irrit. 2B, H320

Name	Product identifier	%	GHS US classification
hexa-2,4-dienoic acid	CAS-No.: 110-44-1	0.1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
hydrochloric acid	CAS-No.: 7647-01-0	<0.1	Met. Corr.1, H290 Skin Corr. 1B, H314 Eye Dam. 1, H318 Acute Tox. 4, H302 STOT SE 3, H335

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 : No special measures required.
First-aid measures after inhalation : Supply fresh air; consult doctor in case of complaints.
First-aid measures after skin contact : Immediately rinse with water.
First-aid measures after eye contact : Remove contact lenses if worn.
If eye irritation occurs, consult a physician.
First-aid measures after ingestion : Rinse mouth. Call a physician immediately. Do not induce vomiting.

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

Gastric or intestinal disorders when ingested.

4.3. Immediate medical attention and special treatment, if necessary

No relevant information available.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Use firefighting measures that suit the environment.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Formation of toxic gases is possible during heating or in case of fire.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Wear self-contained respiratory protective device.
Wear fully protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation.

6.2. Environmental precautions

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

6.3. Methods and material for containment and cleaning up

Use limestone to neutralize and/or absorb spill.
Send for recovery or disposal in suitable receptacles.

6.4. Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.

Information about protection against explosions and fires : No special measures required.

7.2. Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles : Store only in the original receptacle.

Information about storage in one common storage facility : Store away from foodstuffs.
Do not store together with alkalis (caustic solutions).

Further information about storage conditions : Keep containers tightly sealed.
Store in cool, dry conditions in well-sealed receptacles

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Components with limit values that require monitoring at the workplace:
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

7647-01-0 hydrochloric acid	
PEL (USA)	Ceiling limit value: 7 mg/m³, 5 ppm
REL (USA)	Ceiling limit value: 7 mg/m³, 5 ppm
TLV (USA)	Ceiling limit value: 2.98 mg/m³, 2 ppm
EL (Canada)	Ceiling limit value: 2 ppm
EV (Canada)	Ceiling limit value: 2 ppm
LMPE (Mexico)	Ceiling limit value: 2 ppm
	A4

8.2. Appropriate engineering controls

Appropriate engineering controls : Provide adequate ventilation.

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Clear
Odor	:	Odorless
Odor threshold	:	No data available
pH	:	1.66-1.70
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	105-110 °C (221-230 °F)
Flash point	:	The product is not flammable.
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	Not applicable.
Vapor pressure	:	23 hPa (17.3 mm Hg)
Relative vapor density at 20 °C	:	>1.01 g/cm³ (>8.43 lbs/gal)
Relative density	:	No data available
Solubility	:	Fully miscible.
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	:	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 relevant information available.

10.2. Chemical stability

Stable under normal temperatures and pressures.

10.3. Possibility of hazardous reactions

Corrosive action on metals.
Reacts with alkali (lyes).
Toxic fumes may be released if heated above the decomposition point.
Reacts with light alloys to form hydrogen.

10.4. Conditions to avoid

No relevant information available.

10.5. Incompatible materials

No relevant information available.

10.6. Hazardous decomposition products

Under fire conditions only: Chlorine compounds, hydrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Based on available data, the classification criteria are not met.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

IARC (International Agency for Research on Cancer):	
7647-01-0	hydrochloric acid

NTP (National Toxicology Program):
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration):
None of the ingredients are listed.

Skin corrosion/irritation : Based on available data, the classification criteria are not met.
Serious eye damage/irritation : Based on available data, the classification criteria are not met.
Respiratory or skin sensitization : Based on available data, the classification criteria are not met.
Germ cell mutagenicity : Based on available data, the classification criteria are not met.
Carcinogenicity : Based on available data, the classification criteria are not met.
Reproductive toxicity : Based on available data, the classification criteria are not met.
STOT-single exposure : Based on available data, the classification criteria are not met.
STOT-repeated exposure : Based on available data, the classification criteria are not met.
Aspiration hazard : Based on available data, the classification criteria are not met.
Viscosity, kinematic : No data available
Symptoms/effects after skin contact : Burns.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : No relevant information available.

12.2. Persistence and degradability

No relevant information available

12.3. Bioaccumulative potential

No relevant information available.

12.4. Mobility in soil

No relevant information available.

12.5. Other adverse effects

No relevant information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Must not be disposed of together with household garbage. Do not allow product to reach sewage system. The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

SECTION 14: Transport information

In accordance with DOT / TDG / IMDG / IATA

DOT	TDG	IMDG	IATA
14.1. UN number			
Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2. Proper Shipping Name			
Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.3. Transport hazard class(es)			
Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.4. Packing group			
Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.5. Environmental hazards			
No	No	No	No
No supplementary information available			

14.6. Special precautions for user

Not applicable

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

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory, except for:	
7647-01-0	Hydrochloric acid
7447-40-7	Potassium chloride
110-44-1	Hexa-2,4-dienoic acid
7732-18-5	Water

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.	
7647-01-0	Hydrochloric acid

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

Hydrochloric acid (7647-01-0)
Listed on IARC (International Agency for Research on Cancer)

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
None of the ingredients are listed.

SECTION 16: Other information

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

Other information : Data of sections 4 to 8, as well as 10 to 12, do partly not refer to the use and the regular employing of the product (in this sense consult information on use and on product), but to liberation of major amounts in case of accidents and irregularities. The information describes exclusively the safety requirements for the product(s) and is based on the present level of our knowledge. The delivery specifications are contained in the corresponding product sheet. This data does not constitute a guarantee for the characteristics of the product(s) as defined by the legal warranty regulations.

Full text of H-phrases	
H272	May intensify fire; oxidizer
H290	May be corrosive to metals.
H300	Fatal if swallowed
H301	Toxic if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage
H330	Fatal if inhaled
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H340	May cause genetic defects
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

Full text of H-phrases	
H400	Very toxic to aquatic life
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects

Abbreviations and acronyms	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds

Abbreviations and acronyms	
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties
DOT	Department of Transport
TDG	Transportation of Dangerous Goods
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
GHS	Globally Harmonized System of Classification, Labelling and Packaging of Chemicals
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
MARPOL 73/78	MARPOL 73/78: International Convention for the Prevention of Pollution From Ships
ADG	Transport of Australian Dangerous Goods

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should therefore not be construed as guaranteeing any specific property of the product.