

Water Hardness Buffer, Odorless

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Issue date: 5/11/2015 Revision date: 9/30/2021 Supersedes: 9/14/2021 Version: 2.0

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Product name : Water Hardness Buffer, Odorless
Product code : LC26800

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

Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 1	H314	Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1	H318	Causes serious eye damage
Hazardous to the aquatic environment - Acute Hazard Category 3	H402	Harmful to aquatic life

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)

: H314 - Causes severe skin burns and eye damage
H332 - Harmful if inhaled
H402 - Harmful to aquatic life

Precautionary statements (GHS US)

: P260 - Do not breathe mist.
P264 - Wash exposed skin thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, eye protection.
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Water Hardness Buffer, Odorless

Safety Data Sheet

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

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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 or doctor/physician.
P363 - Wash contaminated clothing before reuse.
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 under normal conditions.

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	64	Not classified
Ethanolamine	CAS-No.: 141-43-5	30	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1C, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
Hydrochloric Acid, 37% w/w	CAS-No.: 7647-01-0	5.5	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
EDTA, Magnesium Disodium Salt	CAS-No.: 14402-88-1	0.5	Not classified

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 : Allow affected person to breathe fresh air. Allow the victim to rest. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

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. Get immediate medical advice/attention.

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 or doctor/physician.

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

Water Hardness Buffer, Odorless

Safety Data Sheet

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

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. Harmful if inhaled.
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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	: Could burn but do not ignite readily.
Explosion hazard	: No direct explosion hazard.
Reactivity in case of fire	: Reacts with (some) acids: release of toxic/combustible gases/vapours.
Hazardous decomposition products in case of fire	: Ammonia. Carbon dioxide. Carbon monoxide. hydrogen chloride.

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.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Clean up any spills as soon as possible, using an absorbent material to collect it.
------------------	---

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. Avoid release to the environment.

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.

Water Hardness Buffer, Odorless

Safety Data Sheet

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

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. Use only outdoors or in a well-ventilated area. Avoid breathing mist.
Hygiene measures	: Wash exposed skin thoroughly after handling.

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	: Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Water Hardness Buffer, Odorless

No additional information available

Ethanolamine (141-43-5)

USA - ACGIH - Occupational Exposure Limits

Local name	Ethanolamine
ACGIH OEL TWA [ppm]	3 ppm
ACGIH STEL (ppm)	6 ppm
Remark (ACGIH)	TLV® Basis: Eye & skin irr
Regulatory reference	ACGIH 2021

USA - OSHA - Occupational Exposure Limits

Local name	Ethanolamine
OSHA PEL (TWA) [1]	6 mg/m ³
OSHA PEL (TWA) [2]	3 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

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

USA - ACGIH - Occupational Exposure Limits

ACGIH Ceiling (mg/m ³)	2.98 mg/m ³
ACGIH Ceiling (ppm)	2 ppm

USA - OSHA - Occupational Exposure Limits

OSHA PEL (Ceiling)	7 mg/m ³
OSHA PEL C [ppm]	5 ppm

USA - IDLH - Occupational Exposure Limits

IDLH [ppm]	50 ppm
------------	--------

USA - NIOSH - Occupational Exposure Limits

NIOSH REL (Ceiling)	7 mg/m ³
---------------------	---------------------

Water Hardness Buffer, Odorless

Safety Data Sheet

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

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

NIOSH REL C [ppm]	5 ppm
-------------------	-------

EDTA, Magnesium Disodium Salt (14402-88-1)

No additional information available

Water (7732-18-5)

No additional information available

8.2. Appropriate engineering controls

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

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses. Dust/aerosol mask with filter type P1. Chemical resistant apron.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

High gas/vapour concentration: full face mask with filter type A

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
Color	: Colorless
Odor	: mild
Odor threshold	: No data available
pH	: 12
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	: No data available

Water Hardness Buffer, Odorless

Safety Data Sheet

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

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 additional information available

10.2. Chemical stability

Stable under normal conditions. 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

Strong oxidizers. Strong acids.

10.6. Hazardous decomposition products

Nitrogen oxides. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

Water Hardness Buffer, Odorless

ATE US (dust, mist)	5 mg/l/4h
---------------------	-----------

Ethanolamine (141-43-5)

LD50 oral rat	1720 mg/kg
LD50 dermal rabbit	1000 mg/kg
ATE US (oral)	1720 mg/kg body weight
ATE US (dermal)	1000 mg/kg body weight
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h

Water Hardness Buffer, Odorless

Safety Data Sheet

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

Ethanolamine (141-43-5)

ATE US (dust, mist)	1.5 mg/l/4h
---------------------	-------------

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 body weight
ATE US (dermal)	5010 mg/kg body weight

Water (7732-18-5)

LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000 mg/kg body weight

Skin corrosion/irritation	: Causes severe skin burns. pH: 12
Serious eye damage/irritation	: Causes serious eye damage. pH: 12
Respiratory or skin sensitization	: 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	: Inhalation. Skin and eye contact.
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met. Harmful if inhaled.
Symptoms/effects after inhalation	: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
Symptoms/effects after skin contact	: Caustic burns/corrosion of the skin.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life.

Ethanolamine (141-43-5)

LC50 fish 1	150 mg/l 96 h
EC50 Daphnia 1	65 mg/l 48 h
EC50 other aquatic organisms 1	15 mg/l 72 h

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)

Water Hardness Buffer, Odorless

Safety Data Sheet

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

12.2. Persistence and degradability

Water Hardness Buffer, Odorless	
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 (7732-18-5)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Water Hardness Buffer, Odorless	
Bioaccumulative potential	Not established.
Ethanolamine (141-43-5)	
Log Pow	-1.91
Hydrochloric Acid, 37% w/w (7647-01-0)	
Log Pow	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Water (7732-18-5)	
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.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number

DOT NA No : UN1760
UN-No. (IMDG) : 1760

Water Hardness Buffer, Odorless

Safety Data Sheet

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

UN-No. (IATA) : 1760

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Corrosive liquids, n.o.s.
Proper Shipping Name (TDG) : CORROSIVE LIQUID, N.O.S.
Proper Shipping Name (IMDG) : CORROSIVE LIQUID, N.O.S.
Proper Shipping Name (IATA) : Corrosive liquid, n.o.s.

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 8
Hazard labels (DOT) : 8

IMDG

Transport hazard class(es) (IMDG) : 8
Hazard labels (IMDG) : 8



IATA

Transport hazard class(es) (IATA) : 8
Hazard labels (IATA) : 8



14.4. Packing group

Packing group (DOT) : III
Packing group (IMDG) : III
Packing group (IATA) : III

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

DOT

UN-No.(DOT) : UN1760
DOT Special Provisions (49 CFR 172.102) : 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).
T7 - 4 178.274(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.
TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.

DOT Packaging Exceptions (49 CFR 173.xxx) : 154

Water Hardness Buffer, Odorless

Safety Data Sheet

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

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	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 40 - Stow "clear of living quarters"

IMDG

Special provision (IMDG)	: 223, 274
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T7
Tank special provisions (IMDG)	: TP1, TP28
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provision (IATA)	: A3, A803
ERG code (IATA)	: 8L

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

Water Hardness Buffer, Odorless

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
-------------------------------------	--

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	5.5%
----------------------------	-------------------	------

Water Hardness Buffer, Odorless

Safety Data Sheet

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

Ethanolamine (141-43-5)

SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard
-------------------------------------	---------------------------------

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

Ethanolamine (141-43-5)

Listed on the Canadian DSL (Domestic Substances List)

Water (7732-18-5)

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

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

Revision date : 09/30/2021

Other information : None.

Full text of H- and EUH-statements: see section 16

H227	Combustible liquid
H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled

Water Hardness Buffer, Odorless

Safety Data Sheet

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

Full text of H- and EUH-statements: see section 16

H335	May cause respiratory irritation
H402	Harmful to aquatic life

NFPA health hazard

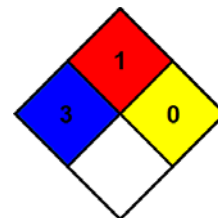
: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard

: 1 - Materials that must be preheated before ignition can occur.

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 : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

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 : F - Safety glasses, Gloves, Synthetic apron, Dust respirator

SDS US LabChem

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.