**SECTION 1: Identification**

1.1. Identification

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

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.
Recommended use: Laboratory chemicals
Restrictions on use: Not for food, drug or household use

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
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 011-703-527-3887

**SECTION 2: Hazard(s) identification**

2.1. Classification of the substance or mixture

GHS-US classification
Acute toxicity (inhalation:dust,mist) Category 4 H332
Skin corrosion/irritation Category 2 H315
Serious eye damage/eye irritation Category 2A H319
Hazardous to the aquatic environment - Acute Hazard Category 3 H402

Full text of H statements: see section 16

2.2. Label elements

GHS-US labeling
Hazard pictograms (GHS-US): GHS07

Signal word (GHS-US): Warning
Hazard statements (GHS-US): H315 - Causes skin irritation
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H402 - Harmful to aquatic life

Precautionary statements (GHS-US): P261 - Avoid breathing mist, vapors, spray
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
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312 - Call a POISON CENTER or doctor/physician if you feel unwell
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing and wash it before reuse
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

Other hazards not contributing to the: None under normal conditions.
Water Hardness Buffer, Odorless
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classification

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water (CAS No) 7732-18-5</td>
<td>64</td>
<td></td>
<td>Not classified</td>
</tr>
<tr>
<td>Ethanolamine (CAS No) 141-43-5</td>
<td>30</td>
<td></td>
<td>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</td>
</tr>
<tr>
<td>Hydrochloric Acid, 37% w/w (CAS No) 7647-01-0</td>
<td>5.5</td>
<td></td>
<td>Acute Tox. 4 (Oral), H302, Skin Corr. 1B, H314, Eye Dam. 1, H318, STOT SE 3, H335, Aquatic Acute 3, H402</td>
</tr>
<tr>
<td>EDTA, Magnesium Disodium Salt (CAS No) 14402-88-1</td>
<td>0.5</td>
<td></td>
<td>Not classified</td>
</tr>
</tbody>
</table>

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 victim to breathe fresh air. Allow the victim to rest. Remove victim from 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 : Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get 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. If eye irritation persists: Get medical advice/attention.

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 after inhalation : Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.

Symptoms/injuries after skin contact : Causes skin irritation.

Symptoms/injuries after eye contact : Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media


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. 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.

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 only in the original container in a cool, well ventilated place away from: Heat sources, Ignition sources, incompatible materials. Keep container closed when not in use.
- Incompatible products: Strong oxidizers.
- Incompatible materials: Sources of ignition. Direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>Control parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanolamine (141-43-5)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Hydrochloric Acid, 37% w/w (7647-01-0)</td>
<td></td>
</tr>
<tr>
<td>ACGIH ACGIH Ceiling (mg/m³)</td>
<td>2.98 mg/m³</td>
</tr>
<tr>
<td>ACGIH ACGIH Ceiling (ppm)</td>
<td>2 ppm</td>
</tr>
<tr>
<td>OSHA OSHA PEL (Ceiling) (mg/m³)</td>
<td>7 mg/m³</td>
</tr>
<tr>
<td>OSHA OSHA PEL (Ceiling) (ppm)</td>
<td>5 ppm</td>
</tr>
<tr>
<td>IDLH US IDLH (ppm)</td>
<td>50 ppm</td>
</tr>
<tr>
<td>NIOSH NIOSH REL (ceiling) (mg/m³)</td>
<td>7 mg/m³</td>
</tr>
<tr>
<td>NIOSH NIOSH REL (ceiling) (ppm)</td>
<td>5 ppm</td>
</tr>
<tr>
<td>EDTA, Magnesium Disodium Salt (14402-88-1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
8.2. Exposure controls


Hand protection: Wear protective gloves.
Eye protection: Chemical goggles or safety glasses.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: Wear appropriate mask.
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: ≤ 11
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
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.

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.
### Water Hardness Buffer, Odorless

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

**10.6. Hazardous decomposition products**


---

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

<table>
<thead>
<tr>
<th>Likely routes of exposure</th>
<th>Acute toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation; Skin and eye contact</td>
<td>Inhalation: dust, mist; Harmful if inhaled.</td>
</tr>
</tbody>
</table>

**Water Hardness Buffer, Odorless**

| ATE US (dust, mist) | 5.000 mg/l/4h |

**Ethanolamine (141-43-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>1720 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>1000 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1720.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1000.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>4500.000 ppmV/4h</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>11.000 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>1.500 mg/l/4h</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>700 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>5010 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>700.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>5010.000 mg/kg body weight</td>
</tr>
</tbody>
</table>

**Water (7732-18-5)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>≥ 90000 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>90000.000 mg/kg body weight</td>
</tr>
</tbody>
</table>

- **Skin corrosion/irritation**: Causes skin irritation. pH: ≤ 11
- **Serious eye damage/irritation**: Causes serious eye irritation. pH: ≤ 11
- **Respiratory or skin sensitization**: Not classified
- **Germ cell mutagenicity**: Not classified
- **Carcinogenicity**: Not classified
- **Specific target organ toxicity – single exposure**: Not classified
- **Specific target organ toxicity – repeated exposure**: Not classified
- **Aspiration hazard**: Not classified
- **Potential Adverse human health effects and symptoms**: Based on available data, the classification criteria are not met. Harmful if inhaled.
- **Symptoms/injuries after inhalation**: Danger of serious damage to health by prolonged exposure through inhalation. Harmful if inhaled.
- **Symptoms/injuries after skin contact**: Causes skin irritation.
- **Symptoms/injuries after eye contact**: Causes serious eye irritation.

**SECTION 12: Ecological information**

**12.1. Toxicity**

- **Ecology - water**: Harmful to aquatic life.
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<table>
<thead>
<tr>
<th>Ethanolamine (141-43-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>EC50 other aquatic organisms 1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hydrochloric Acid, 37% w/w (7647-01-0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
</tbody>
</table>

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. No test data on mobility of the components available.
Biochemical oxygen demand (BOD): Not applicable
Chemical oxygen demand (COD): Not applicable
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: May be harmful to plant growth, blooming and fruit formation.

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 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
SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Water Hardness Buffer, Odorless</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SARA Section 311/312 Hazard Classes</strong></td>
<td>Immediate (acute) health hazard</td>
</tr>
</tbody>
</table>

All components of this product are listed, or excluded from listing, 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%** |

**Ethanolamine (141-43-5)**

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

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

- **EPA TSCA Regulatory Flag**
  - T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.

- **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**
  - Immediate (acute) health hazard

15.2. International regulations

**CANADA**

**Water Hardness Buffer, Odorless**

- **WHMIS Classification**
  - Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects
  - Class D Division 2 Subdivision B - Toxic material causing other toxic effects

**Ethanolamine (141-43-5)**

- Listed on the Canadian DSL (Domestic Substances List)

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

- **WHMIS Classification**
  - Class E - Corrosive Material

**Water (7732-18-5)**

- **WHMIS Classification**
  - Uncontrolled product according to WHMIS classification criteria

**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

**Revision date**: 01/25/2017

**Other information**: None.
**Water Hardness Buffer, Odorless**

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Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H227</th>
<th>Combustible liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
<tr>
<td>H311</td>
<td>Toxic in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H332</td>
<td>Harmful if inhaled</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
</tbody>
</table>

NFPA health hazard: 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual 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.

**HMIS III Rating**

Health: 2 - Moderate Hazard - Temporary or minor injury may occur

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: B

- B - Safety glasses, Gloves

**SDS US LabChem**

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