Hydrochloric Acid, 0.1N (0.1M)

Safety Data Sheet

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

Date of issue: 07/03/2013  Revision date: 10/11/2017  Supersedes: 06/07/2016  Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
Product name : Hydrochloric Acid, 0.1N (0.1M)
Product code : LC15220

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
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
Skin corrosion/irritation
Category 2
Serious eye damage/eye irritation Category 2A

H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements : P264 - Wash exposed skin thoroughly after handling
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
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

2.2. GHS Label elements, including precautionary statements

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

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) :
H315 - Causes skin irritation
H319 - Causes serious eye irritation

Precautionary statements (GHS-US) :
P264 - Wash exposed skin thoroughly after handling
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
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

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS-No.) 7732-18-5</td>
<td>99.64</td>
<td>Not classified</td>
</tr>
<tr>
<td>Hydrochloric Acid, 37% w/w</td>
<td>(CAS-No.) 7647-01-0</td>
<td>0.36</td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1B, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H335</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aquatic Acute 3, H402</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.

**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 (acute and delayed)

- **Symptoms/effects after inhalation**: Possible inflammation of the respiratory tract.
- **Symptoms/effects after skin contact**: Causes skin irritation.
- **Symptoms/effects after eye contact**: Causes serious eye irritation.
- **Symptoms/effects after ingestion**: Nausea. Vomiting.
- **Chronic symptoms**: Affection/discolouration of the teeth.

#### 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


**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.

#### 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**: Try to stop release. Dike and contain spill.

**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 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.

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, metals, cyanides.

Packaging materials: Do not store in corrodeable metal.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Chemical</th>
<th>ACGIH Ceiling (mg/m³)</th>
<th>ACGIH Ceiling (ppm)</th>
<th>OSHA PEL (Ceiling) (mg/m³)</th>
<th>OSHA PEL (ppm)</th>
<th>US IDLH (ppm)</th>
<th>NIOSH REL (ceiling) (mg/m³)</th>
<th>NIOSH REL (ceiling) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid, 37% w/w (7647-01-0)</td>
<td>2.98 mg/m³</td>
<td>2 ppm</td>
<td>7 mg/m³</td>
<td>5 ppm</td>
<td>50 ppm</td>
<td>7 mg/m³</td>
<td>5 ppm</td>
</tr>
<tr>
<td>Water (7732-18-5)</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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:

Gloves. Safety glasses.

Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.
Hydrochloric Acid, 0.1N (0.1M)
Safety Data Sheet

Respiratory protection not required in normal conditions

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>1</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>1</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>36.46 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water. Soluble in ethanol. Soluble in methanol.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>None.</td>
</tr>
</tbody>
</table>

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

10.6. Hazardous decomposition products
Hydrogen chloride.
### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Likely routes of exposure:** Skin and eye contact  
**Acute toxicity:** Not classified

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>LD50 dermal rabbit</th>
<th>ATE US (oral)</th>
<th>ATE US (dermal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid, 37% w/w (7647-01-0)</td>
<td>700 mg/kg</td>
<td>5010 mg/kg</td>
<td>700 mg/kg body weight</td>
<td>5010 mg/kg body weight</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance</th>
<th>LD50 oral rat</th>
<th>ATE US (oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water (7732-18-5)</td>
<td>≥ 90000 mg/kg</td>
<td>90000 mg/kg body weight</td>
</tr>
</tbody>
</table>

#### Skin corrosion/irritation
- Causes skin irritation.  
  \[ \text{pH: 1} \]

#### Serious eye damage/irritation
- Causes serious eye irritation.  
  \[ \text{pH: 1} \]

#### Respiratory or skin sensitization
- Not classified

#### Germ cell mutagenicity
- Not classified  
  - Based on available data, the classification criteria are not met

#### Carcinogenicity
- Not classified  
  - Hydrochloric Acid, 37% w/w (7647-01-0)  
    - IARC group: 3 - Not classifiable
  - Hydrochloric Acid, 0.1N (0.1M)  
    - Not classified

#### Reproductive toxicity
- Not classified  
  - Based on available data, the classification criteria are not met

#### Specific target organ toxicity – single exposure
- Not classified

#### Specific target organ toxicity – repeated exposure
- Not classified

#### Aspiration hazard
- Not classified

### SECTION 12: Ecological information

#### 12.1. Toxicity

**Hydrochloric Acid, 37% w/w (7647-01-0)**
- LC50 fish 1: 282 mg/l (LC50; 96 h)
- EC50 Daphnia 1: < 56 mg/l (EC50; 72 h)

#### 12.2. Persistence and degradability

**Hydrochloric Acid, 0.1N (0.1M)**  
- Persistence and degradability: Not established.

**Hydrochloric Acid, 37% w/w (7647-01-0)**
- Biodegradability: not applicable. No test data on mobility of the components available.
- Biochemical oxygen demand (BOD): Not applicable
- Chemical oxygen demand (COD): Not applicable
### Hydrochloric Acid, 0.1N (0.1M)  
Safety Data Sheet  

**ThOD**  
Not applicable  

**Water (7732-18-5)**  
Persistence and degradability: Not established.  

#### 12.3. Bioaccumulative potential  

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid, 0.1N (0.1M)</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Log Pow</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid, 37% w/w (7647-01-0)</td>
<td>0.25 (QSAR)</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>Not established.</td>
</tr>
</tbody>
</table>

#### 12.4. Mobility in soil  

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Ecology - soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid, 37% w/w (7647-01-0)</td>
<td>May be harmful to plant growth, blooming and fruit formation.</td>
</tr>
</tbody>
</table>

#### 12.5. Other adverse effects  

<table>
<thead>
<tr>
<th>Effect on the global warming</th>
<th>No known effects from this product.</th>
</tr>
</thead>
<tbody>
<tr>
<td>GWPmix comment</td>
<td>No known effects from this product.</td>
</tr>
<tr>
<td>Other information</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

### SECTION 13: Disposal considerations  

#### 13.1. Disposal methods  

<table>
<thead>
<tr>
<th>Waste disposal recommendations</th>
<th>Dispose in a safe manner in accordance with local/national regulations.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ecology - waste materials</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

### SECTION 14: Transport information  

**Department of Transportation (DOT)**  
In accordance with DOT  
Not regulated  

### SECTION 15: Regulatory information  

#### 15.1. US Federal regulations  

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.  

<table>
<thead>
<tr>
<th>Chemical</th>
<th>CAS-No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid, 37% w/w (7647-01-0)</td>
<td>7647-01-0</td>
<td>0.36%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical</th>
<th>EPA TSCA Regulatory Flag</th>
<th>RQ</th>
<th>SARA Section 302 Threshold Planning Quantity (TPQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric Acid, 37% w/w (7647-01-0)</td>
<td>T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA.</td>
<td>5000 lb</td>
<td>500 lb</td>
</tr>
</tbody>
</table>

#### 15.2. International regulations  

**CANADA**  
No additional information available
### Hydrochloric Acid, 0.1N (0.1M)

Safety Data Sheet

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

#### 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**: 10/11/2017  
**Other information**: None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</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>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**: 1 - Materials that, under emergency conditions, can cause significant irritation.

**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**: 1 - Slight Hazard - Irritation or minor reversible injury possible
- **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** - Safety glasses, Gloves

---

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.