

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

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

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.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Irrit. 2 H315
Eye Irrit. 2A H319

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS07

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

2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable
Full text of H-phrases: see section 16

3.2. Mixture

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

Hydrochloric Acid, 0.1N (0.1M)

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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 | : Assure fresh air breathing. 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, both acute and delayed

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

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

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. 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. Special hazards arising from the substance or mixture

| | |
|------------------|-------------------|
| Fire hazard | : Not flammable. |
| Explosion hazard | : Not applicable. |

5.3. Advice for firefighters

| | |
|--------------------------------|---|
| Firefighting instructions | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter 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 vapour. |
| 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. |
|--------------------|---|

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| | |
|-----------------------|-------------------------------------|
| Incompatible products | : Strong bases. metals. cyanides. |
| Packaging materials | : Do not store in corrodable metal. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

| | |
|----------------------------------|--|
| Appropriate engineering controls | : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. |
| Personal protective equipment | : Avoid all unnecessary exposure. |
| 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 |
| Molecular mass | : 36.46 g/mol |
| Colour | : Colourless. |
| Odour | : Odourless. |
| Odour threshold | : No data available |
| pH | : 1 |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Self ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| 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. Soluble in ethanol. Soluble in methanol. |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : Not applicable. |
| Oxidising properties | : None. |
| Explosive limits | : 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.

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10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

metals. Strong bases. cyanides.

10.6. Hazardous decomposition products

Hydrogen chloride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

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

| Water (7732-18-5) | |
|-------------------|---------------|
| LD50 oral rat | ≥ 90000 mg/kg |

Skin corrosion/irritation : Causes skin irritation.
pH: 1

Serious eye damage/irritation : Causes serious eye irritation.
pH: 1

Respiratory or skin sensitisation : 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 |

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 Based on available data, the classification criteria are not met

Aspiration hazard : Not classified Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation : Possible inflammation of the respiratory tract.

Symptoms/injuries after skin contact : Causes skin irritation.

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

Symptoms/injuries after ingestion : Nausea. Vomiting.

Chronic symptoms : Affection/discolouration of the teeth.

SECTION 12: Ecological information

12.1. Toxicity

| Hydrochloric Acid, 37% w/w (7647-01-0) | |
|--|---|
| LC50 fishes 1 | 282 mg/l (96 h; Gambusia affinis; PURE SUBSTANCE) |
| EC50 Daphnia 1 | < 56 mg/l (72 h; Daphnia magna; PURE SUBSTANCE) |
| LC50 fish 2 | 862 mg/l (Leuciscus idus; PURE SUBSTANCE) |
| TLM fish 1 | 282 ppm (96 h; Gambusia affinis; PURE SUBSTANCE) |

12.2. Persistence and degradability

| Hydrochloric Acid, 0.1N (0.1M) | |
|--------------------------------|------------------|
| 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 of the mixture available. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |
| BOD (% of ThOD) | Not applicable |

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12.3. Bioaccumulative potential

| Hydrochloric Acid, 0.1N (0.1M) | |
|--------------------------------|------------------|
| 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). |

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

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.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Additional information

Other information : No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

| Hydrochloric Acid, 37% w/w (7647-01-0) | |
|---|---------------------------------|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory | |
| RQ (Reportable quantity, section 304 of EPA's List of Lists) : | 5000 lb |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |

15.2. International regulations

CANADA

| Hydrochloric Acid, 0.1N (0.1M) | |
|--------------------------------|---|
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

| Hydrochloric Acid, 37% w/w (7647-01-0) | |
|--|------------------------------|
| Listed on the Canadian DSL (Domestic Substances List) inventory. | |
| WHMIS Classification | Class E - Corrosive Material |

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

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Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

15.2.2. National regulations

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

Listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

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

U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Massachusetts - Right To Know List

SECTION 16: Other information

Indication of changes : Revision - See : *

Other information : None.

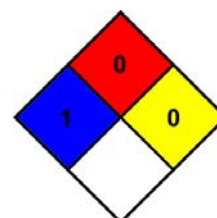
Full text of H-phrases: see section 16:

| | |
|---------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2A | Serious eye damage/eye irritation, Category 2A |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H302 | Harmful if swallowed |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard

Physical : 0 Minimal Hazard

Personal Protection : B

SDS US (GHS HazCom 2012)