

Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: August 22, 2020

1 Identification

- **Product identifier**
- **Trade name:** Phenolphthalein Indicator
- **Product code:** PH1605SS
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
 Flam. Liq. 2 H225 Highly flammable liquid and vapor.
 Acute Tox. 4 H302 Harmful if swallowed.
 Acute Tox. 4 H312 Harmful in contact with skin.
 Acute Tox. 4 H332 Harmful if inhaled.
 Eye Irrit. 2A H319 Causes serious eye irritation.
 Carc. 2 H351 Suspected of causing cancer.
 Repr. 2 H361 Suspected of damaging fertility or the unborn child.
 STOT SE 2 H371 May cause damage to the central nervous system and optic nerve.
 STOT SE 3 H336 May cause drowsiness or dizziness.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**


GHS02 GHS07 GHS08
- **Signal word:** Danger

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· **Hazard statements:**

- H225 Highly flammable liquid and vapor.
 H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
 H319 Causes serious eye irritation.
 H351 Suspected of causing cancer.
 H361 Suspected of damaging fertility or the unborn child.
 H371 May cause damage to the central nervous system and optic nerve.
 H336 May cause drowsiness or dizziness.

· **Precautionary statements:**





- P201 Obtain special instructions before use.
 P202 Do not handle until all safety precautions have been read and understood.
 P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
 P233 Keep container tightly closed.
 P240 Ground/bond container and receiving equipment.
 P241 Use explosion-proof electrical/ventilating/lighting/equipment.
 P242 Use only non-sparking tools.
 P243 Take precautionary measures against static discharge.
 P260 Do not breathe mist/vapors/spray.
 P264 Wash thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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.
 P308+P311 IF exposed or concerned: Call a poison center/doctor.
 P330 Rinse mouth.
 P337+P313 If eye irritation persists: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P370+P378 In case of fire: Use for extinction: Alcohol resistant foam or water spray.
 P403+P235 Store in a well-ventilated place. Keep cool.
 P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

67-63-0	Propan-2-ol	25%
	 Flam. Liq. 2, H225  Eye Irrit. 2A, H319; STOT SE 3, H336	
64-17-5	Ethanol	15.5%
	 Flam. Liq. 2, H225  Eye Irrit. 2A, H319	
67-56-1	Methanol	9.5%

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	 Flam. Liq. 2, H225  Acute Tox. 3, H301; Acute Tox. 3, H331  STOT SE 1, H370	
77-09-8	phenolphthalein	0.42%
	 Muta. 2, H341; Carc. 1B, H350; Repr. 2, H361	
7732-18-5	Water	49.58%

Additional information:

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If skin irritation continues, consult a doctor.

After eye contact:

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; immediately call for medical help.

Most important symptoms and effects, both acute and delayed:

Dizziness

Nausea in case of ingestion.

Acidosis

Blindness

Breathing difficulty

Coughing

Causes eye irritation.

Gastric or intestinal disorders when ingested.

Disorientation

Danger:

May be harmful if swallowed, in contact with skin or if inhaled.

Vapors may cause drowsiness and dizziness.

May cause cancer.

May cause neurotoxic effects.

Danger of impaired breathing.

May cause damage to the central nervous system and optic nerve.

Suspected of damaging fertility or the unborn child.

Indication of any immediate medical attention and special treatment needed:

Medical supervision for at least 48 hours.

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

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- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Alcohol resistant foam
 - Water fog / haze
 - Carbon dioxide
 - Gaseous extinguishing agents
 - Water spray
 - Fire-extinguishing powder
- **For safety reasons unsuitable extinguishing agents:** Water stream.
- **Special hazards arising from the substance or mixture**
 - Highly flammable liquid and vapor.
 - Formation of toxic gases is possible during heating or in case of fire.
- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information:**
 - Use large quantities of foam as it is partially destroyed by the product.
 - Cool endangered product with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Isolate area and prevent access.
 - Wear protective equipment. Keep unprotected persons away.
 - Ensure adequate ventilation.
 - Keep away from ignition sources.
 - Use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions**
 - Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Methods and material for containment and cleaning up**
 - Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
 - Send for recovery or disposal in suitable receptacles.
- **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.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
 - Use only in well ventilated areas.
 - Avoid splashes or spray in enclosed areas.
 - Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
 - Keep respiratory protective device available.

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- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Store in a well-ventilated place. Keep cool.
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
- **Further information about storage conditions:**
Keep containers tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· Control parameters

· Components with limit values that require monitoring at the workplace:

67-63-0 Propan-2-ol

PEL (USA)	Long-term value: 980 mg/m ³ , 400 ppm
REL (USA)	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV (USA)	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI
EL (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
EV (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
LMPE (Mexico)	Short-term value: 400 ppm Long-term value: 200 ppm A4, IBE

64-17-5 Ethanol

PEL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 1900 mg/m ³ , 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m ³ , 1000 ppm
EL (Canada)	Short-term value: 1000 ppm
EV (Canada)	Long-term value: 1,900 mg/m ³ , 1,000 ppm
LMPE (Mexico)	Long-term value: 1000 ppm A3

67-56-1 Methanol

PEL (USA)	Long-term value: 260 mg/m ³ , 200 ppm
REL (USA)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (USA)	Short-term value: 328 mg/m ³ , 250 ppm

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EL (Canada)	Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI Short-term value: 250 ppm Long-term value: 200 ppm Skin
EV (Canada)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
LMPE (Mexico)	Short-term value: 250 ppm Long-term value: 200 ppm PIEL, IBE

· **Ingredients with biological limit values:**

67-63-0 Propan-2-ol

BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)
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67-56-1 Methanol

BEI (USA)	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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· **Exposure controls**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.

· **Engineering controls:** Provide adequate ventilation.

· **Breathing equipment:** In case of inadequate ventilation wear respiratory protection.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

Nitrile rubber, NBR
Neoprene gloves
Butyl rubber, BR

· **Eye protection:**



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protective work clothing

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· **Limitation and supervision of exposure into the environment**

No relevant information available.

· **Risk management measures** No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Appearance:**

Form:

Liquid

Color:

Colorless

· **Odor:**

Like alcohol

· **Odor threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Melting point/Melting range:**

Not determined.

· **Boiling point/Boiling range:**

64.7 °C (148.5 °F)

· **Flash point:**

13 °C (55.4 °F)

· **Flammability (solid, gaseous):**

Not applicable.

· **Auto-ignition temperature:**

425 °C (797 °F)

· **Decomposition temperature:**

Not determined.

· **Danger of explosion:**

Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits**

Lower:

2 Vol %

Upper:

15 Vol %

· **Oxidizing properties:**

Not determined.

· **Vapor pressure at 20 °C (68 °F):**

59 hPa (44.3 mm Hg)

· **Density at 20 °C (68 °F):**

0.89 g/cm³ (7.43 lbs/gal)

· **Relative density:**

0.85-0.96

· **Vapor density:**

Not determined.

· **Evaporation rate:**

Not determined.

· **Solubility in / Miscibility with**

Water:

Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity**

Dynamic:

Not determined.

Kinematic:

Not determined.

· **Other information**

No relevant information available.

10 Stability and reactivity

· **Reactivity:**

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- Reacts with alkali (lyes).
- Reacts with certain metals.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Reacts violently with oxidizing agents.
Reacts with strong acids.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** Excessive heat.
- **Incompatible materials** Oxidizers
- **Hazardous decomposition products**
Under fire conditions only:
Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Harmful if swallowed, in contact with skin or if inhaled.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Irritating effect.
- **Sensitization:** Based on available data, the classification criteria are not met.

· IARC (International Agency for Research on Cancer):

67-63-0	Propan-2-ol	3
64-17-5	Ethanol	1
77-09-8	phenolphthalein	2B

· NTP (National Toxicology Program):

77-09-8	phenolphthalein	R
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· OSHA-Ca (Occupational Safety & Health Administration):

None of the ingredients are listed.

- **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
- **Acute effects (acute toxicity, irritation and corrosivity):**
Toxic if swallowed, in contact with skin or if inhaled.
Causes serious eye irritation.
- **Repeated dose toxicity:** Possible risk of irreversible effects.
- **Germ cell mutagenicity:** Suspected of causing genetic defects.
- **Carcinogenicity:** May cause cancer.
- **Reproductive toxicity:** Suspected of damaging fertility or the unborn child.
- **STOT-single exposure:** May cause damage to the central nervous system and optic nerve.
- **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.

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:** Do not allow product to reach ground water, water course or sewage system.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
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. Residual materials should be treated as hazardous.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|---|---|
| · UN-Number | |
| · DOT, ADR/RID/ADN, IMDG, IATA | UN1987 |
| · UN proper shipping name | |
| · DOT | Alcohols, n.o.s. (ISOPROPANOL, Ethanol, Methanol) |
| · ADR/RID/ADN, IMDG, IATA | ALCOHOLS, N.O.S. (ISOPROPANOL, ETHANOL, METHANOL) |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 |
| · Label | 3 |
| · ADR/RID/ADN | |
|  | |
| · Class | 3 (F1) |

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· Label	3
· IMDG, IATA	
	
· Class	3
· Label	3
· Packing group	
· DOT, ADR/RID/ADN, IMDG, IATA	II
· Environmental hazards	
· Marine pollutant:	No
· Special precautions for user	Warning: Flammable liquids
· Hazard identification number (Kemler code):	33
· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)
- SARA

· Section 302 (extremely hazardous substances):

None of the ingredients are listed.

· Section 313 (Specific toxic chemical listings):

67-63-0 Propan-2-ol

67-56-1 Methanol

· TSCA (Toxic Substances Control Act)

67-63-0 Propan-2-ol

64-17-5 Ethanol

67-56-1 Methanol

77-09-8 phenolphthalein

7732-18-5 Water

· Proposition 65 (California)

· Chemicals known to cause cancer:

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5 Ethanol

77-09-8 phenolphthalein

· Chemicals known to cause developmental toxicity for females:

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None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5	Ethanol
67-56-1	Methanol

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

67-63-0	Propan-2-ol	3
64-17-5	Ethanol	1
77-09-8	phenolphthalein	2B

· **Canadian Domestic Substances List (DSL):**

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Flam. Liq. 2: Flammable liquids – Category 2

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

Carc. 2: Carcinogenicity – Category 2

Repr. 2: Reproductive toxicity – Category 2

STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

STOT SE 2: Specific target organ toxicity (single exposure) – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaassen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

SDS Prepared by:

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Website: www.chemtel.com

Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: March 17, 2020

1 Identification

- **Product identifier**
- **Trade name:** Hydrochloric Acid, 7.7N
- **Product code:** HA6207SS
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
AquaPhoenix Scientific
860 Gitts Run Road,
Hanover, PA 17331
(717) 632-1291
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
STOT SE 3 H335 May cause respiratory irritation.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS05 GHS07
- **Signal word:** Danger
- **Hazard statements:**
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
- **Precautionary statements:**
P234 Keep only in original container.

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Trade name: Hydrochloric Acid, 7.7N

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- P260 Do not breathe mist/vapors/spray.
 P264 Wash thoroughly after handling.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection.
 P301+P330+P331 If swallowed: Rinse mouth. Do NOT induce vomiting.
 P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 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/doctor.
 P363 Wash contaminated clothing before reuse.
 P390 Absorb spillage to prevent material damage.
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.
 P406 Store in corrosive resistant container with a resistant inner liner.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

7732-18-5	Water	60-75%
7647-01-0	Hydrochloric acid	25-40%
	Met. Corr. 1, H290; Skin Corr. 1B, H314; Eye Dam. 1, H318	
	Acute Tox. 4, H302; STOT SE 3, H335	

· **Additional information:**

For the listed ingredient(s), the identity and/or exact percentage(s) are being withheld as a trade secret.
 For the wording of the listed Hazard Statements, refer to section 16.

4 First-aid measures

· **Description of first aid measures**

· **General information:** Immediately remove any clothing soiled by the product.

· **After inhalation:** Supply fresh air and to be sure to call for a doctor.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

Seek immediate help for blistering or open wounds.

· **After eye contact:**

Protect unharmed eye.

Remove contact lenses if worn.

Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

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Trade name: Hydrochloric Acid, 7.7N

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Do not induce vomiting; immediately call for medical help.

· **Most important symptoms and effects, both acute and delayed:**

Eye damage.

Acidosis

Coughing

Strong caustic effect on skin and mucous membranes.

May cause respiratory irritation.

Gastric or intestinal disorders when ingested.

· **Danger:**

Danger of gastric perforation.

Causes serious eye damage.

· **Indication of any immediate medical attention and special treatment needed:**

If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No relevant information available.

· **Special hazards arising from the substance or mixture**

During heating or in case of fire poisonous gases are produced.

· **Advice for firefighters**

· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Wear protective equipment. Keep unprotected persons away.

For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.

· **Environmental precautions**

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

· **Methods and material for containment and cleaning up**

Use limestone to neutralize and/or absorb spill.

Send for recovery or disposal in suitable receptacles.

· **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.

7 Handling and storage

· **Handling**

· **Precautions for safe handling:**

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- Prevent formation of aerosols.
- Avoid splashes or spray in enclosed areas.
- Use only in well ventilated areas.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
 - Unsuitable material for receptacle: steel.
 - Unsuitable material for receptacle: aluminium.
 - Store only in the original receptacle.
- **Information about storage in one common storage facility:**
 - Store away from metals.
 - 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.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **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/m ³ , 5 ppm
REL (USA)	Ceiling limit value: 7 mg/m ³ , 5 ppm
TLV (USA)	Ceiling limit value: 2.98 mg/m ³ , 2 ppm
EL (Canada)	Ceiling limit value: 2 ppm
EV (Canada)	Ceiling limit value: 2 ppm
LMPE (Mexico)	Ceiling limit value: 2 ppm
	A4

- **Exposure controls**
- **General protective and hygienic measures:**
 - The usual precautionary measures for handling chemicals should be followed.
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing.
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the eyes and skin.
- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:**
 - Use suitable respiratory protective device when high concentrations are present.
 - Suitable respiratory protective device recommended.
- **Protection of hands:**

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Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· Material of gloves

Butyl rubber, BR

Fluorocarbon rubber (Viton)

Neoprene gloves

Nitrile rubber, NBR

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· Body protection: Acid resistant protective clothing.

· Limitation and supervision of exposure into the environment

No relevant information available.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· Appearance:

Form:

Liquid

Color:

Clear

· Odor:

Odorless

· Odor threshold:

Not determined.

· pH-value:

Not determined.

· Melting point/Melting range:

Not determined.

· Boiling point/Boiling range:

105-110 °C (221-166 °F)

· Flash point:

The product is not flammable.

· Flammability (solid, gaseous):

Not applicable.

· Auto-ignition temperature:

Not determined.

· Decomposition temperature:

Not determined.

· Danger of explosion:

Product does not present an explosion hazard.

· Explosion limits

Lower:

Not determined.

Upper:

Not determined.

· Oxidizing properties:

Not determined.

· Vapor pressure:

Not determined.

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- | | |
|---|------------------------------------|
| · Density: | |
| Relative density: | Not determined. |
| Vapor density: | Not determined. |
| Evaporation rate: | Not determined. |
| · Solubility in / Miscibility with Water: | Fully miscible. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Other information | No relevant information available. |

10 Stability and reactivity

- **Reactivity:** No relevant information available.
- **Chemical stability:** Stable under normal temperatures and pressures.
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions**
Corrosive action on metals.
Reacts with alkali (lyes).
Reacts with light alloys to form hydrogen.
Reacts with strong oxidizing agents.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** No relevant information available.
- **Incompatible materials**
Metals.
Alkalis.
Oxidizers
- **Hazardous decomposition products**
Under fire conditions only:
Hydrogen chloride (HCl)

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**
- | | | |
|---|------|--------------------|
| · LD/LC50 values that are relevant for classification: | | |
| 7647-01-0 Hydrochloric acid | | |
| Oral | LD50 | 900 mg/kg (rabbit) |
- **Primary irritant effect:**
 - **On the skin:** Strong caustic effect on skin and mucous membranes.
 - **On the eye:** Strong caustic effect.
 - **Sensitization:** Based on available data, the classification criteria are not met.

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· **IARC (International Agency for Research on Cancer):**

7647-01-0 | Hydrochloric acid

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· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

· **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

· **Acute effects (acute toxicity, irritation and corrosivity):**

Causes severe skin burns and eye damage.
May cause respiratory irritation.

· **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:** May cause respiratory irritation.

· **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.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity** No relevant information available.

· **Persistence and degradability** No relevant information available.

· **Bioaccumulative potential:** No relevant information available.

· **Mobility in soil:** No relevant information available.

· **Additional ecological information**

· **General notes:**

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

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

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. Residual materials should be treated as hazardous.

· **Uncleaned packagings**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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14 Transport information

· UN-Number	
· DOT, ADR/RID/ADN, IMDG, IATA	UN1789
· UN proper shipping name	
· DOT	Hydrochloric acid
· ADR/RID/ADN, IMDG, IATA	HYDROCHLORIC ACID
· Transport hazard class(es)	
· DOT	
	
· Class	8
· Label	8
· ADR/RID/ADN	
	
· Class	8 (C1)
· Label	8
· IMDG, IATA	
	
· Class	8
· Label	8
· Packing group	
· DOT, ADR/RID/ADN, IMDG, IATA	II
· Environmental hazards	Not applicable.
· Special precautions for user	Warning: Corrosive substances
· Hazard identification number (Kemler code):	80
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- United States (USA)

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· **SARA**

· **Section 302 (extremely hazardous substances):**

None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**

7647-01-0 Hydrochloric acid

· **TSCA (Toxic Substances Control Act)**

7647-01-0 Hydrochloric acid

7732-18-5 Water

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

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· **Canadian Domestic Substances List (DSL):**

None of the ingredients are listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/

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overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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