

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

### 1.1 Product identifier

Product name	HYDROCHLORIC ACID 4.0 N
CAS-No.	7647-01-0
Product code	GN1112

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Chemical for analysis and production.
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### 1.3 Details of the manufacturer of the safety data sheet

Manufacturer	RCI LABSCAN LIMITED. 24 Rama 1 Road, Pathumwan, Bangkok 10330 Thailand
Telephone number	(662) 613-7911-4
Fax number	(662) 613-7915

### 1.4 Emergency Telephone Number

Emergency phone	(662) 613-7911-4
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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Corrosive to metals (Category 1), H290

Skin irritation (Category 2), H315

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 2.2 Label elements

#### Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Warning

Hazard statement(s)

H290	May be corrosive to metals.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

Precautionary statement(s)

P234	Keep only in original packaging.
P261	Avoid breathing fume/gas/mist/vapours/spray.
P264 + P265	Wash hands thoroughly after handling. Do not touch eyes.
P271	Use only outdoor or in a well-ventilated area.
P280	Wear protective gloves/eye protection/face protection.
P302 + P352	IF ON SKIN: Wash with plenty water.
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.  
 P390 Absorb spillage to prevent material-damage.

**2.3 Other hazards** None

### SECTION 3: Composition/information on ingredients

#### 3.1 Substances

Not applicable

#### 3.2 Mixture

**Hydrochloric acid**

Synonyms -

CAS-No	EC-No	EC-Index-No	Formula	Molecular Weight	Weight %
7647-01-0	231-595-7	017-002-01-X	HCl	36.46 g/mol	14-15

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component	CAS-No	Formula	Concentration (%)	Classification
Hydrochloric acid	7647-01-0	HCl	14-15	Corrosive to metals (Category 1), H290 Skin corrosion (Category 1B), H314 Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Water	7732-18-5	H <sub>2</sub> O	85-86	-

For the full text of the H-Statements mentioned in this Section, see Section 16

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Move to fresh air in case of accidental inhalation of vapors. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus.
Skin contact	Remove contaminated clothing and wash affected skin with soap and water. Dab with polyethylene glycol 400. If signs of poisoning appear, treat as for inhalation. Obtain medical attention. Wash contaminated clothing before reuse.
Eye contact	If the substance has got into the eyes, immediately wash out with plenty of water at least 15 minutes. Obtain medical attention.
Ingestion	Rinse mouth. Do not induce vomiting. Keep patient warm. In case of shortness of breath, give oxygen. Apply artificial respiration only if patient is not breathing or under medical supervision. No artificial aspiration mouth to mouth or mouth to nose. Use suitable instruments/apparatus. Obtain medical attention. Never give anything by mouth to an unconscious person.

#### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2.2 and section 11

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

After swallowing: make victim drink water (two glasses at the most), avoid vomiting (risk of perforation).

Immediately call in physician. Do not attempt to neutralize.

**SECTION 5: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing media**

In adaption to materials stored in the immediate neighborhood.

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

Non-combustible. Hydrogen may form upon contact with metals (danger of explosion). Ambient fire may liberate hazardous vapors. The following may develop in event of fire: Hydrochloric acid.

**5.3 Advice for firefighters**

Do not stay in dangerous zone without self-contained breathing apparatus. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

**5.4 Further information**

Contain escaping vapors with water. Prevent fire-fighting water from entering surface water or ground water.

**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas. Do not breathe vapors or spray mist. Wear a positive-pressure supplied-air respirator, flame retardant antistatic protective clothing. Shut off leaks if without risk. Keep people away from and upwind of spill/leak.

**6.2 Environmental precautions**

Contain or absorb leaking liquid with sand or earth, consults an expert. Prevent liquid entering sewers, basements and workpits. If substance has entered a water course or sewer or contaminated soil, advise police.

**6.3 Methods and materials for containment and cleaning up**

Spillage : soak up with inert absorbent material (e.g. sand, silica gel). Prevent liquid entering sewers, basements and workpits. Transfer to covered drums. Dispose of promptly.

**6.4 Reference to other sections**

For disposal see **Section 13**.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Provision of good ventilation in the working area. The floor must be acid resistant. Suitable materials: Glass, Stoneware, porcelain, Polyvinyl chloride, Polyethylene ( PE), Polypropylene, Polytetrafluoroethylene PTFE (Teflon). Do not leave container open. Avoid spillage.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep tightly closed in a dry, cool and well-ventilated place. Keep out of direct sunlight and away from heat, water and incompatible materials. Requirements for containers, no metal containers.

**Storage class 8B (TRGS 510);** Non-combustible, corrosive hazardous materials.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

The product should only be used in ventilation hoods and fans.

#### Individual protection measures (Personal protective equipment, PPE)

##### Eye/face protection

Goggles giving complete protection to eyes.

##### Skin protection

Chemical resistant apron / corrosive protective clothing, heavy duty work shoes.

Handle with gloves

- Full contact wears gloves from nitrile rubber material.
- Splash contact wears gloves from natural latex material.

The select protective gloves have to satisfy the specifications of EU Directive 89/686 EEC and standard EN 374 derived from it.

##### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Required when vapor/aerosols are generated filter E-(P2) (EN 141 or EN 14387).

##### Environmental exposure controls

Prevent liquid entering sewers, basements and workpits.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical State	Liquid
Color	Colorless
Odour	Pungent
Odour Threshold	Not Available
pH	Not Available
Melting point/range	Not Available
Boiling point/range	Not Available
Flash point	Not Available
Evaporation rate	Not Available
Flammability (solid, gas)	Not Available
Explosion limits: lower	Not Available
upper	Not Available
Vapor Pressure	Not Available
Relative Vapor Density	Not Available
Density	Not Available
Water solubility	Soluble at 20°C
Partition coefficient (n-octanol/water)	Not Available
Auto-Ignition temperature	Not Available
Decomposition Temperature	Not Available
Viscosity	Not Available
Explosive properties	Not Explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Corrosive in contact with metals. Reacts with alkalis, strong oxidizing agents and strong bases.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Risk of explosion in contact with alkali metals, conc. sulfuric acid, potassium permanganate.

The substance can react dangerously with aluminium, alkali hydroxide, amines, ammonia, fluorine, bases, oxidizing agents, metal carbides, calcium hydride, formaldehyde, copper sulfide, lithium silicide, metals, sodium hydride, sodium hypochlorite and its solutions, silanes, silicon dioxide, vinyl methyl ether and zinc.

### 10.4 Conditions to avoid

Heat

### 10.5 Incompatible materials

Aluminium, amines, carbides, hydrides, fluorine, potassium permanganate, strong alkali, salts of oxyhalogenic acids, conc. sulfuric acid, semimetallic oxide, semimetallic hydrogen compounds, aldehydes, sulfides, lithium silicide, vinylmethyl ether.

Incompatible with various metals and metal alloys.

### 10.6 Hazardous decomposition products

Hydrogen gas (Hazardous decomposition products from under contact with metals).

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

#### Acute toxicity

Not Available

#### Skin corrosion/irritation

Slight irritations

#### Serious eye damage/eye irritation

Slight irritations

#### Respiratory or skin sensitization

Not Available

#### Germ cell mutagenicity

Not Available

#### Carcinogenicity

Not Available

#### Reproductive toxicity

Not Available

#### Specific target organ toxicity (STOT) - single exposure

Not Available

#### Specific target organ toxicity (STOT) - repeated exposure

Not Available

**Aspiration hazard**

Not Available

**Further information**

The product should be handled with the care usual when dealing with chemicals.

**SECTION 12: Ecological information****Mixture****12.1 Toxicity**

Toxicity to fish

LC<sub>50</sub> Leuciscus idus: 862 mg/l (1N solution)**12.2 Persistence and degradability**

Not Available

**12.3 Bioaccumulative potential**

Not Available

**12.4 Mobility in soil**

Not Available

**12.5 Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**12.6 Other adverse effects**

Do not allow to enter waters, waste water or soil.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

There are no uniform EC Regulations for the disposal of chemicals or residues. Chemical residues generally count as special waste. The disposal of the latter is regulated in the EC member countries through corresponding law and regulations. We recommend that you contact either the authorities in charge or approved waste disposal companies which will advise you on how to dispose of special waste or burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

**Contaminated packaging**

Disposal in compliance with official regulations. Handle contaminated packaging as hazardous waste in the same way of the substance itself. If not officially specified differently, non-contaminated packaging may be treated like household waste or recycled.

**SECTION 14: Transport information****Land Transport (ADR/RID)**

UN Number	1789
UN proper shipping name	HYDROCHLORIC ACID
Transport hazard class(es)	8
Packing group	III
Environmental hazards	No
Special precautions for user	Yes

**Sea transport (IMDG)**

UN Number	1789
UN proper shipping name	HYDROCHLORIC ACID
Transport hazard class(es)	8
Packing group	III
Marine pollutant	No
Special precautions for user	Yes
EmS	F-A S-B

**Air transport (IATA)**

UN Number	1789
UN proper shipping name	HYDROCHLORIC ACID
Transport hazard class(es)	8
Packing group	III
Environmental hazards	No
Special precautions for user	No

**River transport (AND/ADNR)**

(Not examined)

**SECTION 15: Regulatory information**

This safety datasheet complies with the requirements of Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Not Available

**15.2 Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out.

**SECTION 16: Other information****Recommended restrictions**

Take notice of labels and safety data sheets for the working.

**Reference**

Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Labelling according to EC Directives 67/548 EEC and Regulation (EC) No 1272/2008.

Transportation information according to Recommendations on the Transport of Dangerous Goods, Model Regulations. Twelfth revised edition. United Nations.

Institute for Occupational Safety and Health of the German Social Accident Insurance in Sankt Augustin/Germany,

Source: IFA for Databases on hazardous substances (GESTIS).

**Further information**

Contact to RCI Labscan Limited.

**Revision Date**

23/05/2025

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process unless specified in the text.