SAFETY DATA SHEET

According to Globally Harmonized System of Classification and Labelling of Chemicals (GHS)
Revision Date Mar 15, 2017

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

1.1 Product identifier

Product name	HYDROCHLORIC ACID 0.1 - 1.0 N
CAS-No.	7647-01-0
Product code	GN1108, GN1109, GN1110, GN1111, GN1111X

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

Identified uses	Chemical for analysis and production.

1.3 Details of the supplier of the safety data sheet

Company	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

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

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

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Not Available

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram

Signal word	Warning

Hazard statement(s)

H290	May be corrosive to metals.

Precautionary statement(s)

P234	Keep only in original container.
P390	Absorb spillage to prevent material damage.
P406	Store in corrosive resistant/ container with a resistant inner liner.

2.3 Other hazards None

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixture

Hydrochloric acid

Synonyms Chlorohydric acid, Hydrogen chloride, Muriatic acid, Spirits of salt.

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	0.3- 4.0

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

Component	Concentration	Classification
Hydrochloric acid		
CAS-No 7647-01-0 EC-No 231-595-7 EC-Index-No 017-002-01-X	0.3- 4.0%	Corrosive to metals (Category 1), H290 Skin corrosion (Category 1B), H314 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Hazardous ingredients according to Directive 1999/45/EC

Component	Concentration	Classification
Hydrochloric acid		
CAS-No 7647-01-0 EC-No 231-595-7 EC-Index-No 017-002-01-X	0.3- 4.0%	C, Corrosive, R34 Xi, Irritant, R37

For the full text of the H-Statements and R-Phrases 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. 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 at room temperature 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.

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

Derived No Effect Level (DNEL)

Application Area	Health Effects	Exposure	Value
Worker	Long-term Local effects	Inhalation	8 mg/m³
Consumer	Long-term Local effects	Inhalation	8 mg/m³

Predicted No Effect Concentration (PNEC)

Not Available

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

Appearance: Form	Liquid
: Color	Colorless
Odour	Odorless
Odour Threshold	Not Available
pH	<1 at 20ºC
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 20ºC
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.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

The substance can react dangerously with various metals and metal alloys.

10.4 Conditions to avoid

Heat

10.5 Incompatible materials

Bases, organic bases, 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

Acute oral toxicity

Not Available

Acute inhalation 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

Teratogenicity
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
Not Available

12.2 Persistence and degradability
Not Available

12.3 Bioaccumulative potential
Not Available

12.4 Mobility in soil
Not Available

12.5 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

Packaging 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
Packaging 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
Packaging 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

Full text of H-Statements referred to under sections 2 and 3

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

Full text of R-phrases referred to under sections 2 and 3

C	Corrosive.
Xi	Irritant
R34	Causes burns.
R37	Irritating to respiratory system.

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
15/03/2017