

SAFETY DATA SHEET

x% Hydrochloric acid Solution

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Details

Product name : Hydrochloric acid Solution, 1%-30%
Trade name : x% Hydrochloric acid Solution
Chemical name : Hydrochloric acid solution
Molar mass : 36.461 g/mol
Chemical family : Acid. Solution
Chemical formula : HCl in H₂O
Manufacturer's code : C-SA-B04-30XXX
Use : Laboratory chemicals, analytical reagents

1.2 Company Identification

Manufacturer's name : Centronics Sdn Bhd
Distributor's name & address : Centronics Sdn Bhd
 Centronics Systems & Services Sdn Bhd
 No. 23, Jln Sungai Jerluh 32/196
 Seksyen 32, Bukit Kemuning
 40460 Shah Alam, SEL
Emergency tel. no. : 603-5525 2568
Fax. no. : 603-5131 5668

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the hazardous chemical

Skin Irrit. 2 H315
 Eye Irrit. 2A H319

2.2 Label element



Signal Word

Warning

2.3 Hazard statements

H315 – Causes skin irritation
 H319 – Causes serious eye irritation

2.4 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.

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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

2.5 Other hazards

Other hazards not contributing to the classification

None

2.6 Unknown acute toxicity

No data available

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

Full text of H-phrases: see section 16

3.2 Mixture

CAS#	Chemical Name	Proportion Min. (%)	Proportion Max. (%)	Classification
7647-01-0	Hydrochloric acid, 37% w/w	1.0	30.0	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335
7732-18-5	Water	99.0	90.0	Not classified

SECTION 4: FIRST AID MEASURES

4.1 Description of 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).
Eyes	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.
Skin	Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
Ingestion	Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.
Inhalation	Assure fresh air breathing. Allow the victim to rest.

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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: FIRE-FIGHTING 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 personnel

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.

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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.

Incompatible products : Strong bases, metals, cyanides.

Packaging material : Do not store in corrodable metal.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Hydrochloric Acid, 37% w/w (7647-01-0)		
USA OSHA	OSHA PEL (Ceiling) (mg/m ³)	7 mg/m ³
USA OSHA	OSHA PEL (Ceiling) (ppm)	5 ppm

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

Appearance Form : Liquid
 Color : Colorless

Odor : Practically odorless

pH : ~1.0

Vapor pressure : No information available.

Vapor density : >1.0

Evaporation rate : Not available.

Boiling point : Not available

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Melting point : Not available

Flash point : Not available

Decomposition temperature : Not available

Solubility : Soluble in water. Soluble in ethanol. Soluble in methanol.

Specific gravity/density : >1.0

SECTION 10: STABILITY AND REACTIVITY

Stability : Stable.

Conditions to avoid : Extreme temperatures.

Incompatibility (material to avoid) : Metals, Strong bases, cyanides

Hazardous decomposition or by-products : Hydrogen chloride

Hazardous polymerization : Hazardous polymerization does not occur

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity Not classified

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

Skin corrosion/irritation Causes skin irritation. pH: 0.8 – 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

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

Potential Adverse human health Not classified

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effects and symptoms

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, 1% v/v	
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

12.3 Bioaccumulative potential

Hydrochloric Acid, 1% v/v	
Persistence and degradability	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 INFORMATION

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Waste disposal recommendations Dispose in 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

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

Not classified

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

Not classified

SECTION 16: OTHER INFORMATION

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

Key literature references and sources for data

Suppliers safety data sheet,
Chemadvisor - LOLI,
Merck index,

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End of Safety Data Sheet