

SECTION 1 – IDENTIFICATION

Product Identifier: 0.05M Hydrochloric Acid Solution
Ultra Pure Grade

Catalogue Number: 1433

Other means of identification: Not available

Recommended use of the chemical and restrictions on use:
For R&D use only. Not for pharmaceutical, household or other uses.

Supplier Information:

Axil Scientific Pte Ltd
2 Tukang Innovation Grove
#06-01, JTC MedTech Hub
Singapore 618305

Tel: +65 6775 7318
Email: custcare@axilscientific.com

Apical Scientific Sdn Bhd
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Emergency phone number:

Monday – Friday, 8:00 a.m. to 6:00 p.m.
+65 6775 7318 (Singapore)
+603 8943 3252 (Malaysia)

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification:
Corrosive to metals (Category 1)

GHS Hazard Pictogram



Signal Word: Warning

Hazards statements:

H290: Maybe corrosive to metals.

Precautionary Statement:

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

Other Hazards – None

SECTION 3 – COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical Identity: Hydrochloric Acid
Molecular Formula: HCl
Molecular Weight: 36.46 g/mol

Component	Classification	Concentration
Hydrochloric Acid		
CAS-No: 7647-01-0 EC-No: 231-595-7	Met. Corr. 1; 1; STOT SE 3; H290, H314, H318, H335 Concentration limits: ≥ 25 %: Skin Corr. 1B, H314; 10 - < 25 %: Skin Irrit. 2, H315; 10 - < 25 %: Eye Irrit. 2, H319; ≥ 10 %: 6.9 3, H335; ≥ 0,1 %: Met. Corr. 1, H290;	≤ 1 %

SECTION 4 – FIRST-AID MEASURES

General Advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

Eye Contact

Flush eyes with water as a precaution

Skin Contact

Wash off with soap and plenty of water. Consult a physician

Inhalation

Remove to fresh air. If not breathing, give artificial respiration or if breathing is difficult, give oxygen. Consult a physician.

Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

Ingestion of large amounts may cause:., Local irritation

Indication of immediate medical attention and special treatment needed

Data not available.

SECTION 5 – FIRE-FIGHTING MEASURES

Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture

Nature of decomposition products not known.

Advice for firefighters

Wear self-contained breathing apparatus for fire-fighting if necessary.

Further information

No data available.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas.

Environmental precautions

Do not let product enter drains

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapour or mist

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Corrodes metal. Metal containers must be lined.

SECTION 8 – EXPOSURE CONTROLS/ PERSONAL PROTECTION

Occupational Exposure Limits

Component	CAS-No.	Value	Control parameters	Basis
Hydrochloric acid	7647-01-0	PEL (short-term)	5 ppm 7.5 mg/m ³	Singapore. Workplace Safety and Health Act – First Schedule Permissible Exposure Limits of Toxic Substances

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Eye/ Face Protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

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

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact
Material: Nitrile rubber
Minimum layer thickness: 0.11 mm
Break through time: 480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

a)	Appearance	Clear colourless solution
b)	Odour	Not available
c)	Odour Threshold	Not available
d)	pH	Not available
e)	Melting/freezing point	Not available
f)	Initial boiling point and boiling range	Not available
g)	Flash point	Not available
h)	Evaporation rate	Not available
i)	Flammability (solid, gas)	Not available
j)	Upper/lower flammability or explosive limits	Not available
k)	Vapour pressure	23 hPa at 20 °C
l)	Vapour density	Not available
m)	Relative density	1.000 g/cm ³
n)	Water solubility	Completely miscible

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- | | | |
|----|--|-----------------|
| o) | Partition coefficient:
n-octanol/water | Not available |
| p) | Autoignition temperature | Does not ignite |
| q) | Decomposition temperature | Not available |
| r) | Viscosity | Not available |

SECTION 10 – STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

No data available.

Possibility of hazardous reactions

No data available.

Conditions to avoid

No data available.

Incompatible materials

Metals.

Hazardous decomposition products

Other decomposition products - No data available

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute toxicity

Slight irritation.

Skin corrosion/irritation

Slight irritation.

Serious eye damage/eye irritation

Data not available.

Respiratory or skin sensitization

Data not available.

Germ cell mutagenicity

Data not available.

Carcinogenicity

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid).

Reproductive toxicity

Data not available.

Specific target organ toxicity – single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity – repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Data not available.

Potential health effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion: May be harmful if swallowed.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eyes: May cause eye irritation.

Signs and Symptoms of Exposure

Ingestion of large amounts may cause: Local irritation

Additional Information

RTECS: Not available

SECTION 12 – ECOLOGICAL INFORMATION

Toxicity

Data not available.

Persistence and degradability

Data not available.

Bioaccumulative potential

Data not available.

Mobility in soil

Data not available.

Other adverse effect

May be harmful to aquatic organisms due to the shift of the pH.

SECTION 13 – DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product

SECTION 14 – TRANSPORT INFORMATION

UN Number

ADR/RID: 1789

IMDG: 1789

IATA-DGR: 1789

UN Proper Shipping Name:

ADR/RID: HYDROCHLORIC ACID

IMDG: HYDROCHLORIC ACID

IATA-DGR: Hydrochloric acid

Transport Hazard Class(es)

ADR/RID: 8

IMDG: 8

IATA-DGR: 8

Packing Group

ADR/RID: III

IMDG: III

IATA-DGR: III

Environmental Hazards

ADR/RID: no

IMDG: marine pollutant: no

IATA-DGR: no

Special Precaution for Users

Data not available

SECTION 15 – REGULATORY INFORMATION

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

Notification status

AICS: On the inventory, or in compliance with the inventory

DSL: All components of this product are on the Canadian DSL.

ENCS: Not in compliance with the inventory – Water

IECSC: On the inventory, or in compliance with the inventory

ISHL: Not in compliance with the inventory – Water

KECI: On the inventory, or in compliance with the inventory

NZIoC: On the inventory, or in compliance with the inventory

PICCS: On the inventory, or in compliance with the inventory

SECTION 16 – OTHER INFORMATION

Date of Issue: JULY 11, 2008

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. 1st BASE Pte Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.