# Material Safety Data Sheet

**Date of Issue:** AUGUST 2002

## HYDROCHLORIC ACID 33%

### SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT INFORMATION**

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Hydrochloric Acid 33%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade name</td>
<td>HYDROCHLORIC ACID</td>
</tr>
<tr>
<td>Chemical name</td>
<td>Hydrochloric acid</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>HCL</td>
</tr>
<tr>
<td>Molar mass</td>
<td>36.45</td>
</tr>
<tr>
<td>Chemical family</td>
<td>Acid</td>
</tr>
<tr>
<td>Manufacturer’s code</td>
<td>Not Available</td>
</tr>
<tr>
<td>Use</td>
<td>Water treatment</td>
</tr>
</tbody>
</table>

**COMPANY IDENTIFICATION**

- **Supplier’s name & address:** Lot 2, 3rd Floor, Lorong Bunga Raja 5, Taman Bunga Raja Ph. 2, Off Jalan Lintas, 88300 Kolombong, Kota Kinabalu, Sabah.
- **Telephone number:** 088-437438
- **Emergency telephone number:** 013-8681128

### SECTION 2 - COMPOSITION OF / INFORMATION INGREDIENT

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS no.</th>
<th>Proportion (%)</th>
<th>Exposure limit</th>
<th>Toxicological data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrochloric acid</td>
<td>7647-01-0</td>
<td>33%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### SECTION 3 - PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Clear liquid or pale-yellow colour fuming liquid
- **Odour:** Pungent
- **Solubility:** Very soluble
- **Boiling point (°C):** 109°C (at 20.22% HCL)
- **Melting point (°C):** -65°C (at 20.69% HCL)
- **Vapour pressure (mm/Hg):** Not applicable
- **Evaporation rate:** Not applicable
Percentage volatiles (By Wt.) : Not applicable
Vapour Density : Not applicable
Flash point : None (not combustible)
PH value : <1
Specific Gravity : 1.16 min.

SECTION 4 - HAZARD IDENTIFICATION

EFFECTS OF SHORT TERM (ACUTE) EXPOSURE

Inhalation : Vapour causes damage to lung tissues
Ingestion : May cause serve burning of mouth and stomach
Skin : Will cause skin damage / irritation
Eyes : will irritation or burn

SECTION 5 - FIRST AID MEASURES

At physical state hydrochloric acid is poisonous and corrosive to human tissue. It has reduction properties and is able to generate hydrogen chloride gas. It is irritating to the skin, eyes and mucous membranes, esophagus and stomach as well as nausea, vomiting and drain. Circulatory collapse and death are possible.

Inhalation : Remove the exposed person to fresh air, restore and support breathing as needed. Have qualified medical personnel to administer oxygen. Obtain medical attention immediately. (Do not use oxygen resuscitator if the victim is unconscious.)

Ingestion : Give large quantities of water or milk to drink. Do not induce vomiting, 5% of sodium bicarbonate solution can be used as aerosol for respiratory treatment to maintain proper fluid balance.

Skin contact : Rinse the effected area with an abundance of water and then wash with soap and water. Remove contaminated clothing under a safety shower. If irritation persists or if large areas of the body are affected contact a physician immediately.

Eye contact : Immediately flush eyes including under the eyelids gently but thoroughly with plenty of running water for at least 15 minutes. Seek immediate medical practitioners help.
SECTION 6 - FIRE FIGHTING MEASURES

Permissible concentration : 5 ppm.
Auto-Ignition Temperature  : Not Applicable
Flammable Limit (%)       : Non-flammable
Explosion Properties     : Not Applicable

Exposure limits          : TIME WEIGHTED AVERAGE (TWA) 7mg/m³ for 15 minutes exposure. This is the average of environmental exposure level for hydrochloric acid allowed at workplace.

Extinguishing media      : Use water spray to cool fire-exposed containers to dilute liquid and control the vapours. Remove containers from fire area to prevent rupture. Neutralize spills of hydrochloric acid with limestone, slakes lime or soda ash.

Fire fighting instruction: Fire fighter, should wear full protective clothing and self contained breathing apparatus (SCBA) while fighting the fire.

SECTION 7 - ACCIDENTAL RELEASE MEASURES

Leak / Spill : Avoid the spilled or leaked solution to contact body. Clean up personnel must wear protective equipment prevent skin and eye contact. Contain the spill and pick up if possible for recovery or disposal or flush to holding are with water. Use soda ash or slaked lime for neutralization purpose.

Disposal : Hydrochloric acid can be neutralized with weak oxidizing agents (weak base). Never discharge into sewers, drain or surface water. The solution can be harmful to aquatic life. Follow federal, state and local regulation.

SECTION 8 - HANDLING AND STORAGE

Store hydrochloric acid in closed, vented containers in a cool dry well ventilated area, away from sources of ignition and incompatible materials. Keep separate from strong oxidizers, strong bases and direct sunlight. Storage areas should have acid resistant floors and drainage facilities.
SECTION 9 - EXPOSURE CONTROL AND PERSONAL PROTECTION

a. Exposure limit : Not applicable
b. Personal protection
   Eye / Skin protection : Wear chemical safety glasses, wear impervious gloves, and apron. Wear full / half gas mask for face protection. If contact is repeated or prolonged, wear full impervious clothing. Do not wear contact lenses.
   Respiratory protection : Either self-contained breathing apparatus (SCBA) or Oxygen resuscitator.
   Ventilation : Use adequate general or local exhaust ventilation to keep vapour level as low as possible.

SECTION 10 - STABILITY AND REACTIVITY

Stability : Avoid exposure to incompatible chemical and to any material whose compatibility with hydrochloric acid has not yet been established.
Incompatibles : It reacts dangerously with acetic anhydride, ammonium hydroxide, calcium phosphate, ethylene, diamine, silver peroxyde, oleum, perchloric acid, B-propiclatone, carbon tetrachloride, sodium hydroxide, sulphuric acid and many carbide compounds.
Decomposition product : None known
Hazardous polymerization : Will not occur

SECTION 11 - TOXICOLOGICAL INFORMATION

Toxicity data : Toxic
Carcinogenicity : N.A.
Reproductive effect : N.A.
Effects of overexposure
a. Skin : Contact with the solution can cause irritation / burn.
b. Eyes : Contact with solution vapour can irritate / burn eyes
Chronic effects : Not Applicable
Target organ : Respiratory system, skin and eyes

SECTION 12 - ECOLOGICAL INFORMATION

Mobility : Miscible in water
Bioaccumulation : N.A.
Biodegradability : N.A.
Toxicity : Toxic to aquatic lifes

SECTION 13 - DISPOSAL INFORMATION

Disposed in accordance with all applicable federal, state and local environmental regulation.

SECTION 14 - TRANSPORT INFORMATION

Not Applicable.

SECTION 15 - REGULATORY INFORMATION

Proposed classification : Corrosive
Risk phrase : R 35 37
Safety : S7/9 26 44

SECTION 16 - OTHER INFORMATION

Not Applicable.

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