SAFETY DATA SHEET
HYDROCHLORIC ACID >25%

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME
HYDROCHLORIC ACID >25%

SYNONYMS, TRADE NAMES
Hydrogen Chloride Solution, Muriatic Acid, Vo - pH 8120,

SUPPLIER
UNIVAR LTD
46 Peckover Street
BRADFORD
West Yorkshire
United Kingdom
BD1 5BD
Tel: +44 1274 377000
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sds@univareurope.com

SDS No. H017

Emergency Contact Number (Office Hours) +441274 377070
Emergency Contact Number (Outside Office Hours) +441865 407333

2 HAZARDS IDENTIFICATION

Irritating to respiratory system. Causes burns.

CLASSIFICATION C;R34. Xi;R37.

3 COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>EC No.</th>
<th>CAS-No.</th>
<th>Content</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROCHLORIC ACID &gt;25%</td>
<td>231-595-7</td>
<td>7647-01-0</td>
<td>&gt;25%</td>
<td>C;R34 Xi;R37</td>
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</table>

The Full Text for all R-Phrases are Displayed in Section 16

EU INDEX NO. 017-002-00-2
EC (EINECS) NO. 231-595-7
CAS-NO. 7647-01-0

4 FIRST-AID MEASURES

INHALATION
Remove victim immediately from source of exposure. Rinse nose and mouth with water. Get medical attention.

INGESTION
Immediately rinse mouth and drink plenty of water (200-300 ml). Provide rest, warmth and fresh air. Get medical attention immediately!

SKIN CONTACT
Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention immediately.

EYE CONTACT
Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Continue to rinse for at least 15 minutes and get medical attention.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
HYDROCHLORIC ACID >25%

SPECIFIC HAZARDS
Hydrogen chloride (HCl).

PROTECTIVE MEASURES IN FIRE
Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS
Follow precautions for safe handling described in this safety data sheet. Avoid contact with skin and eyes. Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS
Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

SPILL CLEAN UP METHODS
Absorb with inert, damp, non-combustible material, then flush area with water. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS
Avoid spilling, skin and eye contact. Provide good ventilation. Eye wash facilities and emergency shower must be available when handling this product.

STORAGE PRECAUTIONS
Store in tightly closed original container in a dry and cool place.

STORAGE CLASS
Corrosive storage.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT

ENGINEERING MEASURES
Provide adequate ventilation, including appropriate local extraction, to ensure that the defined workplace exposure limit is not exceeded.

RESPIRATORY EQUIPMENT
If ventilation is insufficient, suitable respiratory protection must be provided.

HAND PROTECTION
Butyl rubber gloves are recommended.

EYE PROTECTION
Wear approved safety goggles.

OTHER PROTECTION
Wear rubber apron. Wear rubber footwear. Provide eyewash station and safety shower.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE Fuming Liquid
COLOUR Colourless
ODOUR Acidic.
SOLUBILITY Soluble in water
MELTING POINT (°C) <-29
pH-VALUE, CONC. SOLUTION 1 RELATIVE DENSITY 1.127 - 1.190

10 STABILITY AND REACTIVITY
HYDROCHLORIC ACID >25%

STABILITY
Stable under normal temperature conditions and recommended use.

CONDITIONS TO AVOID
Avoid excessive heat for prolonged periods of time.

MATERIALS TO AVOID
Strong alkalis.

HAZARDOUS DECOMPOSITION PRODUCTS
Hydrogen chloride (HCl).

11 TOXICOLOGICAL INFORMATION

INHALATION
Irritating to respiratory system. May cause damage to mucous membranes in nose, throat, lungs and bronchial system.

INGESTION
Causes burns. Swallowing concentrated chemical may cause severe internal injury. May cause chemical burns in mouth, oesophagus and stomach.

SKIN CONTACT
Causes burns.

EYE CONTACT
Causes burns. Contact with concentrated chemical may very rapidly cause severe eye damage, possibly loss of sight.

MEDICAL SYMPTOMS
Extreme irritation of eyes and mucous membranes, including burning and tearing. Burning sensation in mouth. Sore throat.

12 ECOLOGICAL INFORMATION

ECOTOXICITY
Dangerous for the environment if discharged into watercourses.

LC 50, 96 Hrs, FISH mg/l 100 - 1000

MOBILITY
The product is soluble in water.

BIOACCUMULATION
The product is not bioaccumulating.

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION
When handling waste, consideration should be made to the safety precautions applying to handling of the product. Do not puncture or incinerate even when empty.

DISPOSAL METHODS
Confirm disposal procedures with environmental engineer and local regulations.

14 TRANSPORT INFORMATION

UK ROAD CLASS 8
PROPER SHIPPING NAME HYDROCHLORIC ACID
UN NO. ROAD 1789
ADR CLASS NO. 8
UK ROAD PACK GR. II
ADR CLASS
Class 8: Corrosive substances.
HYDROCHLORIC ACID >25%

15 REGULATORY INFORMATION

LABELLING

Corrosive

CONTAINS
HYDROCHLORIC ACID  25%

RISK PHRASES
R34 Causes burns.
R37 Irritating to respiratory system.

SAFETY PHRASES
S24/25 Avoid contact with skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).

STATUTORY INSTRUMENTS
Chemicals (Hazard Information and Packaging) Regulations.

APPROVED CODE OF PRACTICE
Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply.

GUIDANCE NOTES
Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

16 OTHER INFORMATION

REVISION DATE 28th June 2007
REV. NO./REPL. SDS GENERATED 05
SDS NO. H017

SAFETY DATA SHEET STATUS
Approved.

DATE 5th February 2007
SIGNATURE Jitendra Panchal

RISK PHRASES IN FULL
R34 Causes burns.
R37 Irritating to respiratory system.