



MATERIAL SAFETY DATA SHEET

PRODUCT: Hydrochloric Acid 32%

Date of Issue: May 2013

1. IDENTIFICATION OF THE MATERIAL AND THE SUPPLIER

Product Name: Hydrochloric Acid 32%
Other Names: Muriatic Acid, Hydrogen chloride solution
Recommended Use: General Chemical
Formula: HCl
Chemical Family: Strong Mineral Acid
Company: Glendale Packaging Pty Ltd
Address: Unit 1/75 Newton Road, Wetherill Park NSW 2164
Telephone Number: (02) 9756 2315
Emergency Telephone: (02) 9756 2315
A.C.N: 114 020 450

2. HAZARDS IDENTIFICATION

Hazard Classification: Hazardous substance Dangerous Goods.
Classified as hazardous according to the criteria of NOHSC.

Hazard Category: C + Corrosive,

Risk Phrase(s):
R34 – Causes Burns,
R37 – Irritating to respiratory system
R41 – Risk of serious damage to eyes

Safety Phrase(s):
S2 - Keep out of reach of Children.
S9 – Keep container in a well ventilated place.
S23 - Do not breathe vapour/mist/aerosol.
S24/25 – Avoid contact with the skin and eyes.
S26 – In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre.
S36/37/39 – Wear suitable protective clothing, gloves and eye Face protection.
S45 - In case of accident, or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show the label where possible).



SUDSP Classification: Schedule 6

ADG Classification: Class 8 Corrosive

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: Nil

Appearance: Colorless liquid with irritating fumes.

Ingredients:

Chemical Name:	Risk Phases:	CAS No:	Proportion (w/w):
Hydrochloric acid	R35, R37, R41	7647-01-0	32%
Water		7732-18-5	68%

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

4. FIRST AID MEASURES

Poison Information Centres in each state can provide additional assistance for Scheduled poisons. Phone 131126 from anywhere in Australia.

Ingestion:

Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Rinse mouth thoroughly with water. Give water to drink. DO NOT induce vomiting. If victim can swallow, have him/her drink 250 to 300mls of water to dilute material in stomach. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Repeat administration of water. Obtain medical attention immediately.

Eye Contact:

SPEED IS ESSENTIAL. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 30 minutes, by the clock, holding the eyelid(s) open. Take care not to rinse contaminated water into the non affected eye. If irritation persists, repeat flushing. If available, a neutral saline solution may be used to flush the contaminated eye(s) an additional 30 minutes. Obtain medical attention immediately.

Skin Contact:

First aiders avoid direct contact with this chemical. As quickly as possible, flush contaminated area with lukewarm, gently running water for at least 30 minutes, by the clock. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). If irritation persists, repeat flushing. Obtain medical attention immediately. Completely decontaminate clothing, shoes and leather goods before re-use or discard.

**Inhalation:**

Remove source of contamination or move victim to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish skin discoloration (suggesting a lack of blood oxygen), ensure airways are free of obstruction and have qualified person give oxygen through a face mask. Apply artificial respiration if patient not breathing. Obtain medical advice immediately.

Other First Aid:

Provide general supportive measures (comfort, warmth, rest). Consult a physician and/or the nearest poison Information Centre for all exposures except minor instances of inhalation contact.

Advice to Doctor:

Treat symptomatically as for strong acids.

5. FIRE FIGHTING MEASURES

Specific hazards:

Non-Combustible material, but will support combustion of other products. Oxidising agents. Reacts with most metals generating flammable / explosive hydrogen gas.

Fire fighting further advice:

Not Combustible. Will emit toxic fumes in fire. Fire fighters to wear self-contained breathing apparatus and protective clothing.

Suitable Extinguishing media:

Water fog (or if unavailable fine water mist or spray), foam, dry agent (carbon dioxide, dry chemical powder).

6. ACCIDENTAL RELEASE MEASURES

Small Spills:

Wear personal protective equipment. Contain using sand or diatomaceous earth. Collect and seal in properly labeled acid resistant drums. Wash remaining area with large volumes of water.

**Large Spills:**

PRECAUTIONS: Restrict access to area. Clear area of unprotected personnel. Provide adequate protective equipment and ventilation. Remove chemicals which can react with the Spilled material. Spills are slippery.

CLEAN UP: Contain spill or leak. Do not allow entry into sewers or waterways. Neutralise the final traces and flush with water. Spilled solutions should be contained by dyking with inert material, such as sand or earth. Solutions can be recovered or carefully diluted with water and cautiously neutralised with alkalis such as lime or soda ash, adjusting Ph to 6 – 10.

DISPOSAL: Federal, state and local regulations should be reviewed prior to disposal.

7. HANDLING AND STORAGE

Handling:

Avoid generating mist or spray. When diluting solution, add material to water in small amounts. Label containers. Keep containers closed when not in use. Empty containers may contain residues which are hazardous. Use smallest possible amounts in designated areas with adequate ventilation. Have emergency equipment (for fires, spills, and leaks e.t.c) readily available.

Storage Conditions:

Materials that react violently with acids should not be stored in the same area. Use corrosion-resistant structural materials, lightning and ventilation systems in the storage area. Store in suitable labeled containers. Keep containers tightly closed when not in use and empty. Protect from damage. Containers made of nickel alloys are preferred. Storage tanks should be above ground and surrounded with dykes capable of holding entire contents. Limit quantity of material in storage. Restrict access to storage areas. Post warning signs when appropriate. Keep storage area separate from populated work areas. Inspect periodically for deficiencies such as damage or leaks.

Class 8 goods are not to be loaded with Classes 1, 4.3, 5.1, 5.2, 6 *, 7, or foodstuffs or foodstuff empties. * When Class 6 is a cyanide and class 8 is an acid. Do not load or store with strong alkalis

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards:

(Hydrogen Chloride) Peak limitation: 7.5mg/m³, peak NOHSC Australia.

Engineering Controls:

Maintain concentration below recommended exposure limit.

Engineering control methods to reduce hazardous exposures are preferred. General methods include mechanical ventilation, (dilution and general exhaust), process or personnel enclosure, control of process conditions and process modification (e.g. substitution of a less



hazardous material). Administrative controls and personal protective equipment may also be required. Use corrosion – resistant ventilation system separate from other exhaust ventilation systems. Exhaust directly to the outside. Use local exhaust ventilation and process enclosure if necessary, to control airborne spray / mists. Supply sufficient air to make up for air removed by exhaust systems.

Personal Protection:

RESPIRATORY PROTECTION: If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

Have appropriate equipment available for use in emergencies such as spills or fire. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

CONCENTRATIONS IN AIR: **UP TO 50 mg/m³:** Powered air-Purifying Respirator with dust and mist filter(s); or SAR operated in a continuous flow mode. **UP TO 100 mg/m³:** Full-face piece SCBA; or full-face piece SAR; or full-face piece respirator with high-efficiency particulate filter(s). **UP TO 250 mg/m³.** Positive pressure, full-face piece SAR.

EMERGENCY OR PLANNED ENTRY IN UNKNOWN CONCENTRATIONS OR IDLH CONDITIONS: Positive pressure, full-face piece SCBA; or positive pressure, full-face piece SAR with an auxiliary positive pressure SCBA.

ESCAPE: Full-face piece respirator with high – efficiency particulate filter(s); or escape – type SCBA, NOTE: Substance causes eye irritation or damage; eye protection needed.

ABBREVIATIONS: SAR = supplied – air respirator; SCBA = self contained breathing apparatus. IDLH = immediately dangerous to Life or Health.

NOTE: In these recommendations the IDLH concentration is defined as the maximum concentration which would not cause any escape impairing symptoms or irreversible health effects to a person exposed for 30 minutes if the respirator failed.

Eye/Face Protection: Splash proof chemical safety goggles. A face shield may also be necessary.

Skin Protection: Impervious gloves, coveralls, boots and/or other resistant protective clothing (nitrile or neoprene). Have a safety shower/eye-wash fountain readily available in the immediate work area.

NOTE: Resistance of specific materials can vary from product to product. Evaluate resistance under conditions of use and maintain clothing carefully.

Personal Protection comments. Remove contaminated clothing promptly. Keep contaminated clothing in closed containers. Discard or launder before rewearing. Inform laundry personnel of contaminants hazards. DO not eat, drink or smoke in work areas. Wash hands thoroughly after handling this material. Maintain good house keeping.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colourless to slight yellow pungent liquid.
Odour Threshold:	No data
Specific Gravity:	Approx 1.1
Flash point:	Non-combustible (does not burn)
Flammability Limits:	Non-flammable
Boiling Point:	No data
Melting Point:	No data
Vapour Pressure:	No data
pH:	< 1
Solubility in water:	Completely soluble

10. STABILITY AND REACTIVITY

Incompatibility – Materials to avoid

Oxidising agents – Liberates toxic Chlorine gas.

Strong Alkalis – May react violently.

Metals – reaction may produce flammable and explosive hydrogen gas.

Organohalogen Compounds – May react to form spontaneously combustible compounds.

Nitro and chloro organic compounds – May react explosively.

Hazardous decomposition Products – Hydrogen Chloride.

Hazardous Polymerization – Does not occur

Corrosivity to metals – Corrosive to steel, aluminum, tin, zinc and most metals.

Fire Explosion Hazard:

Explosion Data – Sensitivity to mechanical impact > Not Applicable

Explosion Data – Sensitivity to Static Charge > Not Applicable

Fire Hazard Comments – This product and its solutions will not burn or support combustion. However, reaction with a number of commonly encountered oxidisable materials (see Chemical Reactivity) can generate sufficient heat to ignite nearby combustible materials.

Fire Extinguishing Agents – Use an extinguisher appropriate to the material which is burning.

Fire Fighting Procedures – Water can be used to extinguish a fire in an area where product is stored.

Combustion Products – None

Fire Fighters to wear full body protective clothing with breathing apparatus.



11. TOXICOLOGICAL INFORMATION

Acute Effects:

Ingestion:

Burning of the mouth, throat and oesopagus, vomiting, diarrhea, collapse and possible death may result.

Eye Contact:

Extremely Corrosive. Can penetrate deeply causing irritation or severe burns depending on the concentrations and duration of exposure. In severe cases, ulceration and permanent damage may occur.

Skin Contact:

Extremely Corrosive. Capable of causing severe burns with deep ulceration. Can penetrate to deeper layers of skin. Corrosion will continue until removed. Severity depends on concentration and duration of exposure. Repeated or prolonged contact may lead to irritant contact dermatitis.

Inhalation:

Effects of inhaling spray and mists have not been clearly established. Most references indicate that the irritation of the nose, throat and lungs would occur due to the corrosive nature of the product.

Long Term Effects:

HEALTH EFFECTS – Possible erosion of teeth, bronchial irritation.

CARCINOGENICITY – Not classed as a carcinogen by NOHSC

TERATOGENICITY and EMBRYOTOXICITY – Insufficient Information.

TOXICOLOGICAL SYNERGISTIC MATERIALS – Insufficient Information.

MUTAGENICITY – Insufficient Information.

POTENTIAL FOR ACCUMULATION – None.

Toxicity Data:

Hydrogen chloride: LD50 (rat, oral) > 900mg/kg. Inhalation LC50 (rat): 300ppm/1 hr. More detailed information about the effects of chemicals on health can be obtained from NOHSC Australia.

12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

Refer to State Land Waste Management Authority. Decontaminate empty containers before disposal, by triple rinsing with water, using rinse water in further processing or neutralize rinse water.



14. TRANSPORT INFORMATION

U.N. Number: 1789
Proper Shipping Name: Hydrochloric Acid Solution
DG Class: 8
Hazchem Code: 2R
Packing Group: II
Segregation Dangerous Goods: Not to be loaded with Classes 1, 4.3, 5.1, 5.2, 6, 7, Class 8 Strong Alkalis or Foodstuffs, or Foodstuff empties.

15. REGULATORY INFORMATION

Classified as hazardous according to the criteria of NOHSC, Schedule 6 poison according to SUSDP, Class 8 according to Australian Dangerous Goods.

R-phrases: **R34** Causes burns **R41** Risk of serious damage to eyes.
R37 Irritating to Respiratory system.

S-phrases: **S2** Keep out of reach of children **S9** Keep container in well ventilated place.
S23 Do not breathe vapour/mist/aerosol.
S24/25 Avoid contact with the skin and eyes.
S26 In case of contact with eyes, rinse immediately with plenty of water and Seek medical advice.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S45 In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately. (Show the label where possible).

16. OTHER INFORMATION

References: (1) National Code of Practice for the preparation of Material Safety Data Sheets 2nd Edition [NOHSC: 2011 (2003)], (2) List of Designated Hazardous Substances [NOHSC: 10005:1999] (3) ADG Code 6th edition. (4) Orica Chemicals Hydrochloric Acid MSDS issued Nov 2004. (5) Material Safety Data Sheet for Hydrochloric Acid 20% or greater issued by Formula Chemicals (NSW) Pty Ltd dated December 2005.

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END OF MSDS
