



PRICE CHEMICALS PTY LIMITED

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MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION

Revision Date JULY 2011

Product Name HYDROCHLORIC ACID

Other Names MURIATIC ACID; CHLOROHYDRIC ACID; HYDROGEN CHLORIDE;
AQUEOUS HYDROGEN CHLORIDE 28-36% HYDROCHLORIC ACID;

Uses Unspecified.

Contact Information

Organisation	Location	Telephone	Ask For
Price Chemicals Pty Ltd	10 Pile Rd Somersby NSW 2250 Australia	+61 2 43400088	Technical Officer
Poison Information Centre	Westmead NSW Australia	131126	
Chemcall 24 Hour Emergency Number	Australia New Zealand	1800-127406 0800-243622	
National Poisons Centre	New Zealand	0800-764766	

2. HAZARD IDENTIFICATION

Hazardous according to criteria of NOHSC/ASCC.

Dangerous According to the Australian Code for the Transport of Dangerous Goods.

Classified as Dangerous Goods According to NZS 5433:1999.

TOXIC CORROSIVE

Risk Phrases

R23 Toxic by inhalation.

R35 Causes severe burns.

Safety Phrases

S9 Keep container in a well-ventilated place.

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, seek medical advice immediately (show the label where possible).

ERMA New Zealand Approval Code HSR001557

HSNO Hazard Classification 6.1B 8.1A 8.2B 9.3A 9.1D 9.3C

This Material Safety Data Sheet may not provide exhaustive guidance for all HSNO Controls assigned to this substance. The ERMA Web Site should be consulted for a full list of triggered controls and cited regulations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	CAS Number	Proportions (%)
HYDROCHLORIC ACID	[7647-01-0]	28.0-36.0

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure.

Swallowed Immediately rinse mouth with water. Give water to drink. DO NOT induce vomiting. If vomiting occurs give further water. Seek immediate medical attention.

Eye SPEED IS ESSENTIAL! Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Take care not to rinse contaminated water into the non-affected eye. Seek immediate medical attention.

Skin Remove contaminated clothing. Wash affected area with large quantities of water. Continue to wash skin for at least 10 minutes. Seek immediate medical attention.

Inhaled Remove victim from exposure to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Do NOT use mouth to mouth method. Induce artificial respiration with the aid of a pocket mask equipped with a one way valve or other proper respiratory medical device. Seek medical attention immediately.

Advice to Doctor Treat symptomatically based on judgement of doctor and individual reactions of patient. Following exposure, the patient should be kept under medical review for at least 48 hours as delayed pulmonary oedema may develop.

Aggravated medical conditions caused by exposure Repeated exposure at low levels may produce erosion of the teeth and ulceration of the nasal septum and gums. High atmospheric contamination may lead to pulmonary oedema.

5. FIRE FIGHTING MEASURES

Extinguishing Media In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions. Use water spray to cool fire exposed containers. **Hazards from Combustion Products** Non-combustible liquid. Containers may burst if overheated. Incompatible with oxidising agents, most common metals, alkalis and sources of ignition. Hazardous decomposition products may include hydrogen chloride.

Special Protective Precautions and Equipment for Fire Fighters Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

Flammability Conditions Product is a non-flammable liquid. However, flammable hydrogen gas may be formed in contact with metals. Additional Information

Hazchem Code 2R

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures Personnel involved in the clean up should wear full protective clothing as listed in section 8. Avoid accidents, clean up immediately. Evacuate all unnecessary personnel. Increase ventilation. Avoid walking through spilled product as it is slippery when spilt. Stop leak if safe to do so. Do NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. Shut off all possible sources if ignition.

Methods and Materials for Containment and Clean Up Soak up spilled product using absorbent non-combustible material such as sand or soil. Avoid using sawdust or cellulose. When saturated collect material, transfer to suitable, labelled, dry chemical-waste containers and dispose of promptly as hazardous waste. Spillages should be neutralised by the use of lime or lime slurry followed by water washing.

7. HANDLING AND STORAGE

Precautions for Safe Handling Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Provide adequate ventilation, including appropriate local extraction to ensure that the defined occupational exposure limit is not exceeded. Keep away from common metals, oxidising agents and alkalis. Remove contaminated clothing and wash before reuse.

Conditions for Safe Storage (Including Any Incompatibles) Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Bulk quantities should be stored in rubber lined steel or suitable plastic equipment. Keep smaller quantities in suitable plastic or glass containers. This product has a UN classification of 1789 and a Dangerous Goods Class 8 Corrosive) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.

Container Type Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. Bulk quantities should be stored in rubber lined steel or suitable plastic equipment. Keep smaller quantities in suitable plastic or glass containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards The following exposure standard has been established by The Australian Safety and Compensation Council (ASCC); Hydrochloric Acid CAS 7647-01-0: TWA = 5ppm (7.5 mg/m³ Peak Limitation) NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. Peak limitation is a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Biological Limit Values No information available on biological limit values for this product.

Engineering Controls A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred

because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.

Personal Protection RESPIRATOR: Wear an approved full-face piece respirator with high efficiency particulate filter (AS/NZS1715/1716). EYES: Wear chemical splash goggles in combination with a full-face shield (AS1336/1337). HANDS: Wear impervious, elbow-length neoprene or nitrile acid resistant gloves (AS2161). CLOTHING: Chemical-resistant coveralls, splash apron and safety footwear (AS3765/2210).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Almost colourless to Pale yellow Fuming Liquid

Formula ClH

Odour Characteristically Pungent

Vapour Pressure 11 (28% HCl, 20°C) mm Hg (1 atmosphere)

Vapour Density Not applicable.

Boiling Point 97.7°C (28% HCl) deg C

Melting Point -63°C (28% HCl) deg C

Solubility in Water Soluble

Specific Gravity 1.14 (28% HCl, 15°C) (Water = 1)

Flash Point Not applicable.

pH Not applicable.

Lower Explosion Limit Not applicable.

Upper Explosion Limit Not applicable.

Ignition Temperature Not applicable.

Specific Heat Value Not applicable.

Particle Size Not applicable.

Volatile Organic Compounds (VOC) Content Not applicable.

Evaporation Rate Not applicable.

Viscosity Not applicable.

Percent Volatile Not applicable.

Octanol/Water partition coefficient Not applicable.

Saturated Vapour Concentration Not applicable.

Additional Characteristics Not applicable.

Flame Propagation/Burning Rate of Solid Materials Not applicable.

Properties of Materials That May Initiate or Contribute to Fire Intensity Not applicable.

Potential for Dust Explosion Product is a liquid.

Reactions that Release Flammable Gases Corrosive to metals liberating hydrogen gas.

Fast of Intensely Burning Characteristics Not applicable.

Non-flammables That Could Contribute Unusual Hazards to a Fire Not applicable.

Release of Invisible Flammable Vapours and Gases Not applicable.

Decomposition Temperature Not applicable.

Additional Information Boiling Point : 56.1°C (36% HCl) Vapour Pressure : 115 (36% HCl,20°C) Freezing Point : -27°C (36% HCl) Specific Gravity : 1.18 (36% HCl,15°C)

10. STABILITY AND REACTIVITY

Chemical Stability Product is stable under normal conditions of use, storage and temperature. Corrosive Liquid.

Conditions to Avoid Avoid excessive heat, direct sunlight, moisture, static discharges, freezing and high temperatures.

Incompatible Materials Incompatible with oxidising agents, most common metals, alkalis and sources of ignition.

Hazardous Decomposition Products Hazardous decomposition products may include hydrogen chloride. Can react violently if in contact with oxidising agents, liberating chlorine gas. Attacks most common metals liberating hydrogen, which can form explosive mixtures with air.

Hazardous Reactions Hazardous Polymerisation has not been reported. Can react violently if in contact with oxidising agents, liberating chlorine gas. Attacks most common metals liberating hydrogen, which can form explosive mixtures with air. Exothermic reaction with alkalis.

11. TOXICOLOGICAL INFORMATION

Toxicity Data No toxicological information available for this product.

Health Effects – Acute

Swallowed Will immediately cause corrosion of and damage to the gastrointestinal tract.

Eye Causes burns. Risk of serious damage to eyes. May cause permanent impairment of vision.

Skin Causes burns.

Inhaled Mist vapour will cause irritation to the upper respiratory tract, coughing and choking sensation. Concentration of 50-100ppm are barely tolerated for up to 1 hour. Higher concentrations may cause corrosion of the respiratory tract. Fluid build up on the lung (pulmonary oedema) may occur up to 48 hours after exposure and could prove fatal.

12. ECOLOGICAL INFORMATION

Ecotoxicity Large discharges may contribute to the acidification of water and be fatal to fish and other aquatic life. Can cause damage to vegetation. Can cause severe damage to aquatic plants.

Persistence and Degradability Will freely dissociate to hydrogen and chloride ions.

Mobility The product is predicted to have high mobility in soil. Liquid with high volatility. The product is soluble in water.

Environmental Fate (Exposure) Do not allow product to enter drains, waterways or sewers. Effect of Effluent Treatment: Large discharge may contribute to the acidification of effluent treatment systems and injure sewage treatment organisms.

Bioaccumulative Potential The product does not bioaccumulate.

13. DISPOSAL CONSIDERATIONS

Disposal Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

Special Precautions for Land Fill or Incineration Contact a specialist disposal company or the local waste regulator for advice. This should be done in accordance with 'The Hazardous Waste Act'.

14. TRANSPORT INFORMATION

Land Transport (Australia)

Regulation Name ADG

UN Number 1789

Shipping Name HYDROCHLORIC ACID

Dangerous Goods Class 8 Corrosive Substance

Subsidiary Risk Not applicable.

Pack Group II

Precaution for User TOXIC CORROSIVE

Hazchem Code 2R

EPG 40 TOXIC AND/OR CORROSIVE SUBSTANCES Non-combustible - Water reactive

Special Provision Not applicable.



Sea Transport

Regulation Name IMDG

UN Number 1789

Shipping Name HYDROCHLORIC ACID

Dangerous Goods Class 8 Corrosive Substance

Subsidiary Risk Not applicable.

Pack Group II

Precaution for User TOXIC CORROSIVE

Hazchem Code No data available.

EPG 40 TOXIC AND/OR CORROSIVE SUBSTANCES Non-combustible - Water reactive

Special Provision Not applicable.



Air Transport

Regulation Name IATA

UN Number 1789

Shipping Name HYDROCHLORIC ACID

Dangerous Goods Class 8 Corrosive Substance

Subsidiary Risk Not applicable.

Pack Group II

Precaution for User TOXIC CORROSIVE

Hazchem Code No data available.

EPG No data available.

Special Provision Not applicable.



Land Transport (New Zealand)

Regulation Name NZS5433

UN Number 1789

Shipping Name HYDROCHLORIC ACID

Dangerous Goods Class 8 Corrosive Substance

Subsidiary Risk Not applicable.

Pack Group II

Precaution for User TOXIC CORROSIVE

Hazchem Code 2R

EPG 40 TOXIC AND/OR CORROSIVE SUBSTANCES Non-combustible - Water reactive

Special Provision Not applicable.



Land Transport (Papua New Guinea)

Regulation Name NZS5433

UN Number 1789

Shipping Name HYDROCHLORIC ACID

Dangerous Goods Class 8 Corrosive Substance

Subsidiary Risk Not applicable.

Pack Group II

Precaution for User TOXIC CORROSIVE

Hazchem Code 2R

EPG 40 TOXIC AND/OR CORROSIVE SUBSTANCES Non-combustible - Water reactive

Special Provision Not applicable.



Land Transport (Fiji)

Regulation Name NZS5433

UN Number 1789

Shipping Name HYDROCHLORIC ACID

Dangerous Goods Class 8 Corrosive Substance

Subsidiary Risk Not applicable.

Pack Group II

Precaution for User TOXIC CORROSIVE

Hazchem Code 2R

EPG 40 TOXIC AND/OR CORROSIVE SUBSTANCES Non-combustible - Water reactive

Special Provision Not applicable.



15. REGULATORY INFORMATION

Poisons Schedule 6

EPG 40

AICS Name HYDROCHLORIC ACID

NZ Toxic Substance 3

HSNO Hazard Classification 6.1B 8.1A 8.2B 9.3A 9.1D 9.3C

ERMA Approval Code HSR001557

16. OTHER INFORMATION

Literature References No data available.

Sources for Data No data available.

Legend to Abbreviations and Acronyms

< less than

> greater than

ADG Australian Dangerous Goods Code

AICS Australian Inventory of Chemical Substances

CAS Chemical Abstracts Service (Registry Number)

cm² square centimetres

CO₂ Carbon Dioxide

COD Chemical Oxygen Demand

deg C (°C) degrees Celsius

ERMA Environmental Risk Management Authority

g gram

g/cm³ grams per cubic centimetre

g/l grams per litre

HSNO Hazardous Substance and New Organism

IATA International Air Transport Association Dangerous Goods Regulations

IDLH Immediately Dangerous to Life and Health

IMDG International Maritime Dangerous Goods Code

immiscible liquids are insoluble in each other

kg kilogram

kg/m³ kilograms per cubic metre

LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals

ltr Litre

m³ cubic metre

mbar millibar

mg milligram

mg/24H milligrams per 24 hours

mg/kg milligrams per kilogram

mg/m³ milligrams per cubic metre

Misc miscible

miscible liquids form one homogeneous liquid phase regardless of the amount of either component present

mm millimetre

mPa.s milli Pascal per second

N/A Not Applicable

NOHSC National Occupational Health and Safety Commission

OECD Organization for Economic Co-operation and Development

PEL Permissible Exposure Limit

ppb parts per billion

ppm parts per million

ppm/2h parts per million per 2 hours

ppm/6h parts per million per 6 hours

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tn tonne

TWA Time Weighted Average

ug/24H micrograms per 24 hours

UN United Nations (number)

wt weight

This MSDS summarises Price Chemicals Pty Ltd best knowledge of the health and safety hazard information of the selected substance and how to safely handle the selected substance in the workplace however Price Chemicals Pty Ltd expressly disclaims that the MSDS is a representation or guarantee of the chemical specifications for the substance.

Each user should read the MSDS and consider the information in the context of how the selected substance will be handled and used in the workplace including its use in conjunction with other substances.

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