

Infosafe No™	1CHC1	Issue Date : September 2017	RE-ISSUED by ACR
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Product Name : **HYDROCHLORIC ACID 0.1 - <10.0%**

Classified as hazardous

## 1. Identification

**GHS Product Identifier** HYDROCHLORIC ACID 0.1 - <10.0%

**Company Name** AUSTRALIAN CHEMICAL REAGENTS (ACR) (ABN 19 008 264 211)

**Address** 38 - 50 Bedford Street Gillman  
S.A. 5013 Australia

**Telephone/Fax Number** Tel: (08) 8440 2000  
Fax: (08) 8440 2001

**Recommended use of the chemical and restrictions on use** Laboratory reagent.

Other Names	Name	Product Code
	HYDROCHLORIC ACID 0.2N	0013
	HYDROCHLORIC ACID 3.0% w/v	0471
	HYDROCHLORIC ACID 0.15N	4248
	HYDROCHLORIC ACID 0.1N	0012
	HYDROCHLORIC ACID 0.25N	0014
	HYDROCHLORIC ACID 0.5N	0015
	HYDROCHLORIC ACID 0.6N	0893
	HYDROCHLORIC ACID 0.8N	4079
	HYDROCHLORIC ACID 1.0% v/v	1949
	HYDROCHLORIC ACID 0.100M	3879
	HYDROCHLORIC ACID 0.12 to 0.14M	5929
	HYDROCHLORIC ACID 0.13 to 0.15M (A)	5930A
	HYDROCHLORIC ACID 0.13 to 0.15M (B)	5930B
	HYDROCHLORIC ACID 0.1315N	5397
	HYDROCHLORIC ACID 0.161N (N/6.2)	3404
	HYDROCHLORIC ACID 0.4N	2861
	HYDROCHLORIC ACID 1.000N	0016
	HYDROCHLORIC ACID 1.5N	4348
	HYDROCHLORIC ACID 15% v/v	5611
	HYDROCHLORIC ACID 16% v/v	5766
	HYDROCHLORIC ACID 2% w/v	5359
	HYDROCHLORIC ACID 2.5N	2538
	HYDROCHLORIC ACID 25% v/v	0832
	HYDROCHLORIC ACID 3% w/v	0471

**Other Information** EMERGENCY CONTACT NUMBER: +61 08 8440 2000  
Business hours: 8:30am to 5:00pm, Monday to Friday.

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## 2. Hazard Identification

**GHS classification of the substance/mixture** Corrosive to Metals: Category 1

**Signal Word (s)** WARNING

**Hazard Statement (s)** H290 May be corrosive to metals.

**Pictogram (s)** Corrosion

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**Precautionary statement – Prevention** P234 Keep only in original container.

**Precautionary statement – Response** P390 Absorb spillage to prevent material damage.

**Precautionary statement – Storage** P406 Store in corrosive resistant container with a resistant inner liner.

**Precautionary statement – Disposal** P501 Dispose of contents/container according to local, state and federal regulations.

### 3. Composition/information on ingredients

**Chemical** Liquid

**Characterization**

**Information on Composition** Aqueous solution of the gas hydrogen chloride.

Ingredients	Name	CAS	Proportion	Hazard Symbol	Risk Phrase
	Water	7732-18-5	>=90-99.9 %		
	Hydrochloric acid	7647-01-0	>=0.1-9.9 %		

### 4. First-aid measures

**Inhalation** Remove from exposure, rest and keep warm. If symptoms persist, obtain medical attention.

**Ingestion** Rinse mouth thoroughly with water immediately. Give water to drink. DO NOT induce vomiting. Seek medical advice if effects persist.

**Skin** Wash affected areas with copious quantities of water immediately. Remove contaminated clothing. If irritation occurs seek medical advice.

**Eye contact** Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek medical attention.

**First Aid Facilities** Maintain eyewash fountain and drench facilities in work area.

**Advice to Doctor** Treat symptomatically as for acids.

**Other Information** For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

### 5. Fire-fighting measures

**Suitable extinguishing media** Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Specific hazards arising from the chemical** Material does not burn. Runoff may pollute waterways.

**Hazchem Code** 2R

### 6. Accidental release measures

**Spills & Disposal** Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, or confined areas. Cover with DRY earth, sand or other compatible, non-combustible material followed by a plastic sheet to minimize spreading or contact with rain. Use clean, non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal. SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

**Personal Protection** Use personal protective equipment listed in Section 8.

### 7. Handling and storage

**Precautions for Safe Handling** Avoid ingestion and inhalation of gas/fumes/vapour/spray mist. Avoid contact with eyes, on skin, or clothing. Use only with adequate ventilation.

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<b>Conditions for safe storage, including any incompatibilities</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area. Keep well closed and protected from direct sunlight and moisture. Do not store in metal containers.
<b>Corrosiveness</b>	Very corrosive to most metals. Rubber-lined steel, Haveg, Hastelby and tantalum, are the most commonly used corrosion-resistant materials of construction. Rubber, glass, plastic and ceramic ware are also resistant to corrosion.
<b>Storage Temperatures</b>	Store at room temperature (15 to 25 °C recommended).

## 8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Hydrochloric acid			7.5	5	Hydrogen chloride Peak Limitation
<b>Other Exposure Information</b>	A time weighted average (TWA) has been established for Hydrogen chloride (Worksafe Aust) of 7.5 mg/m <sup>3</sup> (Peak limitation), (5 ppm). 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.					
<b>Appropriate engineering controls</b>	Provide sufficient ventilation to ensure that the working environment is below the TWA (time weighted average). Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a flame proof exhaust ventilation system is required. Refer to AS 1940-The storage and handling of flammable and combustible liquids and AS 2430-Explosive gas atmospheres for further information concerning ventilation requirements.					
<b>Respiratory Protection</b>	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing vapours or mists. Select and use respirators in accordance with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. When mists or vapours exceed the exposure standards then the use of the following is recommended: Approved respirator with organic vapour and dust/mist filters. Filter capacity and respirator type depends on exposure levels.					
<b>Eye Protection</b>	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.					
<b>Hand Protection</b>	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Excellent: NR latex, nitrile and neoprene. Supported Polyvinyl Chloride (PVC) gloves. Unsupported Butyl. Unsupported Viton.					
<b>Body Protection</b>	Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.					
<b>Hygiene Measures</b>	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.					

## 9. Physical and chemical properties

<b>Form</b>	Liquid
<b>Appearance</b>	Clear, colourless to light yellow liquid.
<b>Odour</b>	Odourless to slight, characteristic, irritating odour.
<b>Melting Point</b>	Approximately 0 °C (based on data for water); weighted average: -2.32 °C (3%); -18 °C (10%).
<b>Boiling Point</b>	Approximately 100 °C.
<b>Solubility in Water</b>	Miscible (soluble) in all proportions.
<b>Solubility in Organic Solvents</b>	Soluble in alcohols, diethyl ether and benzene; insoluble in hydrocarbons.
<b>Specific Gravity</b>	Approximately 1.
<b>pH</b>	For HCl solutions: 0.1 (1.0 N), 1.1 (0.1 N), 2.02 (0.01 N).
<b>Vapour Pressure</b>	Essentially the same as water; 0.527 Pa (10%).
<b>Vapour Density (Air=1)</b>	Essentially the same as water (0.62).

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**Evaporation Rate** Essentially the same as water (0.36) (BuAc=1).

**Flammability** Non combustible material.

## 10. Stability and reactivity

**Chemical Stability** Stable at normal temperatures, pressures and conditions of use or storage.

**Conditions to Avoid** Metals and incompatible materials.

**Incompatible Materials** Metals, bases (e.g. sodium hydroxide, amines), aldehydes, epoxides, reducing agents, oxidizing agents, permanganates, explosives, acetylides, borides, carbides, silicides, cyanides, sulfides and phosphide.

## 11. Toxicological Information

**Ingestion** May cause burns to mouth, throat and stomach.

**Inhalation** May be harmful if inhaled.

**Skin** Liquid is slightly to highly irritating to skin and may cause burns.

**Eye** Liquid is irritating to highly irritating to eyes and may cause scarring of the cornea (based on animal data). Vapour may cause eye irritation.

**Carcinogenicity** Hydrochloric acid [7647-01-0] is evaluated in the IARC Monographs (Vol. 54; 1992) as Group 3: Not classifiable as to carcinogenicity to humans.

**Mutagenicity** No human information is available. Questionable positive results reported in some short-term tests. Negative results in some in-vitro mammalian cell tests.

## 12. Ecological information

**Ecotoxicity** Quantitative data on the ecological effect of this product are not available. The following applies to HCl in general: Harmful effect on aquatic organisms. Harmful effect due to pH shift. Does not cause biological oxygen deficit.

**Environmental Protection** Do not allow to enter waters, waste water, or soil!

## 13. Disposal considerations

**Disposal Considerations** Dispose of according to relevant local, state and federal government regulations.

## 14. Transport information

**Transport Information** Dangerous Goods of Class 8 Corrosives are incompatible in a placard load with any of the following: - Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids and Class 7.

**U.N. Number** 1789

**UN proper shipping name** HYDROCHLORIC ACID

**Transport hazard class(es)** 8

**Hazchem Code** 2R

**Packaging Method** 3.8.8RT8

**Packing Group** III

**IERG Number** 40

## 15. Regulatory information

**Poisons Schedule** S5

## 16. Other Information

**Literature References** 'Standard for the Uniform Scheduling of Medicines and Poisons No. 15', Commonwealth of Australia, November 2016.  
Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997.  
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007.  
Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011.

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**Contact  
Person/Point**

Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010.  
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.  
Safe Work Australia, 'Hazardous Substances Information System, 2005'.  
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.  
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.

Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**

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