CANNING
POOL & PUMP CENTRE

SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

GHS IDENTIFIER	**HYDROCHLORIC ACID**
PRODUCT (MATERIAL) NAME	
OTHER NAMES	MURIATIC ACID; SPIRITS OF SALTS
PROPER SHIPPING NAME	**HYDROCHLORIC ACID**
RECOMMENDED USE	General chemical, for pH adjustment in swimming pools.
SUPPLIER NAME/ADDRESS	Canning Laboratories Pty. Ltd Unit 4 / 213 Railway Avenue Kelmscott WA 6111 PO Box 258 Armadale WA 6992
TELEPHONE NO.	(08) 9390 7040
EMERGENCY PHONE NUMBER	0410467404 (A/H)

SECTION 2: HAZARDS IDENTIFICATION

HAZARD CLASSIFICATION OF SUBSTANCE	Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; **DANGEROUS GOODS**. This material is hazardous according to Safe Work Australia; **HAZARDOUS SUBSTANCE**.
SUSMP SCHEDULE	6 - POISON
GHS HAZARD CATEGORY	Corrosive to Metals - Category 1 Skin Corrosion - Sub-category 1B Eye Damage - Category 1 Specific target organ toxicity (single exposure) - Category 3
GHS PICTOGRAMS	
GHS SIGNAL WORD	**DANGER**
HAZARD STATEMENTS	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation
PRECAUTIONARY STATEMENTS	
GENERAL	P101 If medical advice is needed, have product container or label at hand P102 Keep out of reach of children P103 Read label before use
PREVENTION	P234 Keep only in original container.

	P260 Do not breathe mist / vapours / spray. P264 Wash hands thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves / protective clothing / eye protection / face protection.
RESPONSE	P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P363 Wash contaminated clothing before re-use. P321 Specific treatment (see First Aid Measures on Safety Data Sheet). P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician. P390 Absorb spillage to prevent material damage.
STORAGE	P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P406 Store in corrosive resistant container with a resistant inner liner.
DISPOSAL	P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

MIXTURE

Chemical identity of ingredients	Proportion of ingredients	CAS Number(s) for ingredients	Hazard Codes
Hydrogen Chloride Gas	34.5% m/v	[7647-01-0]	H290; H314;H335
Water	30-60%	[7732-18-5]	

If the sum of ingredients is less than 100%, the material consists of further ingredients determined not to be hazardous or below their cut-off limits as listed in HSIS.

SECTION 4 FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Ingestion:	Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.
Eye Contact:	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Continue to wash with large amounts of water until medical help is available.
Skin Contact:	If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.
Inhalation:	Remove victim to ventilated area, avoid becoming a casualty. Apply artificial respiration if not breathing. In the event of a cardiac arrest apply external cardiac massage. Seek medical attention.
ADVICE TO DOCTOR.	Treat symptomatically. Can cause corneal burns.

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label.
Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

SYMPTOMS OF EXPOSURE	Considered to be harmful by all exposure routes. Contamination of eyes can result in permanent injury.
Ingestion:	Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.
Eye Contact:	A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.
Skin Contact:	Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.
Inhalation:	Breathing in mists or aerosols will produce respiratory irritation.
ACUTE	Exposure to high concentrations of the vapour or the acid as a mist may lead to lung damage including pulmonary oedema and emphysema. May result in dental discolouration and erosion and ulceration of the nose and mouth.

SECTION 5 FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA	Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).
SPECIFIC HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:	Non-combustible material.

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:	Decomposes on heating emitting toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire.
Additional information	Non flammable but flammable and explosive hydrogen gas may be formed on contact with metals. If involved in a fire, highly toxic fumes will be evolved. If safe to do so remove containers from path of the fire. Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of decomposition
Hazchem Code	2R

SECTION 6 ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES /ENVIRONMENTAL PRECAUTIONS:	Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.
PERSONAL PRECAUTIONS/PROTECTIVE EQUIPMENT/METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:	Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Dilute with water or carefully neutralise with soda ash or slaked lime. All water should be added by hose from a safe distance, as reaction is exothermic (gives off heat) and will increase release of vapour. Wash to drain with excess water. For large spills notify emergency services. Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water.

SECTION 7 HANDLING AND STORAGE

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

PRECAUTIONS FOR SAFE HANDLING	Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children. Always add the acid to water, never the reverse.
CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:	Store in cool place and out of direct sunlight. Store away from incompatible materials described in Section 10. Store away from foodstuffs. Do not store in aluminium containers. Do not store in galvanised containers. Keep containers closed when not in use - check regularly for leaks.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS:	No value assigned for this specific material by Safe Work Australia. However , TLV Hydrogen Chloride gas: 5ppm (7 mg/m^3) ceiling value. Detectable odour at < 5ppm. Respiratory and mucous membrane irritant > 35ppm. As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.
APPROPRIATE ENGINEERING CONTROLS:	Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. If inhalation risk exists: Use with local exhaust ventilation or while wearing suitable mist respirator. Keep containers closed when not in use. Ensure an eye bath and safety shower are available and ready for use.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT (PPE):	The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, RUBBER BOOTS, AIR MASK , GLOVES (Long), APRON.

Wear overalls, chemical goggles, full face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, colourless to slightly yellow fuming liquid. Hydroscopic (absorbs water.) Pungent odour.
Flammability:	Product is not flammable
Melting Point:	Not applicable
Boiling Point:	100° C
Flash Point:	NA
Vapour Pressure:	0.13 kpa @ 739° C
Volatiles:	100%
Vapour Density	1.26
pH 1% aqueous solution	< 1.0
Specific Gravity:	1.14-1.15
Solubility in water	Soluble in water (exothermic- releases heat)

SECTION 10 STABILITY AND REACTIVITY

Chemical Reactivity	Reacts with alkalis.
Chemical stability	Corrosive to many metals with the liberation of extremely flammable hydrogen gas.
Possibility of hazardous reactions:	Reacts with oxidising agents and sodium hypochlorite liberating toxic chlorine gas.
Conditions to avoid	Avoid contact with foodstuffs.
Incompatible materials	Incompatible with alkalis , oxidising agents , sodium hypochlorite , cyanides , and many metals .
Hazardous decomposition products	Will release toxic gas (Hydrogen chloride)

SECTION 11 TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label.
Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

ACUTE TOXICITY: Oral LC_{50}(rabbit) 900mg/kg ;
hydrogen chloride (gas) Inhalation LC_{50} (rat): 3124 ppm/1h.
Lowest Lethal Concentration LC (human) : 1300ppm (30min)

Acute toxicity: Hydrochloric acid	Expected to be toxic
Skin corrosion/irritation:	Expected to be corrosive.
Serious eye damage/irritation:	Expected to be corrosive.
Respiratory or skin sensitisation:	Not expected to be a sensitiser.
Germ cell mutagenicity:	Not expected to be mutagenic.
Carcinogenicity:	Not expected to be carcinogenic.
Reproductive toxicity:	Not expected to impair fertility.
Specific Target Organ Toxicity (STOT) – single exposure:	Corrosive
Specific Target Organ Toxicity (STOT) – repeated exposure:	Repeated exposure to low levels of hydrochloric acid may produce discolouration and erosion of teeth and ulceration of the nasal passages.
Aspiration hazard:	Expected to be a hazard.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY Avoid contaminating waterways.

Acute toxicity:

Fish –LC50 Mosquito fish (female)	282 mg/L/24hr
Aquatic invertebrate	
LC_{50} Shore Crab	240 mg/L/48hr
LC_{50} Sand shrimp	260 mg/L/48hr
Algae –	Data not available
Microorganisms –	Data not available

Chronic toxicity:

Fish –	Data not available
Aquatic invertebrate –	Data not available
Algae –	Data not available
Microorganisms –	Data not available

PERSISTENCE AND DEGRADABILITY Persistence is unlikely based on information available.

MOBILITY Avoid contaminating waterways. The product is highly acidic. If large spills occurred a water pH drop could be responsible for an environmental effect on aquatic organisms.

ENVIRONMENTAL FATE (EXPOSURE) No Data Available

BIOACCUMULATIVE POTENTIAL	No information available

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS AND CONTAINERS	Refer to State Land Waste Management Authority. Empty containers must be decontaminated. Normally suitable for disposal at approved land waste site.

SECTION 14 TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; **DANGEROUS GOODS.**

UN NUMBER	1789
UN PROPER SHIPPING NAME	HYDROCHLORIC ACID (>25%)
CLASS AND SUBSIDIARY RISK	8
PACKING GROUP	II
SPECIAL PRECAUTIONS FOR USER	
IERG	40
HAZCHEM CODE	2R

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN NUMBER	1789
UN PROPER SHIPPING NAME	HYDROCHLORIC ACID (>25%)
CLASS AND SUBSIDIARY RISK	8
PACKING GROUP	II
IMDG EMS Fire	F-A
IMDG EMS Spill	S-B

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN NUMBER	1789
UN PROPER SHIPPING NAME	HYDROCHLORIC ACID (>25%)
CLASS AND SUBSIDIARY RISK	8
PACKING GROUP	II

SECTION 15 REGULATORY INFORMATION

CLASSIFICATION:	This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.
CLASSIFICATION OF THE SUBSTANCE OR MIXTURE:	Corrosive to Metals - Category 1 Skin Corrosion - Sub-category 1B Eye Damage - Category 1 Specific target organ toxicity (single exposure) - Category 3
HAZARD STATEMENT(S):	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation
POISONS SCHEDULE (SUSMP):	S6 Poison.
AICS	All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

Additional national and/or international regulatory information.

SECTION 16 OTHER INFORMATION

CONTACT PERSON/POINT	FOR EMERGENCIES ONLY CONTACT	: Australia	: 000
	POISONS INFORMATION CENTRE	: Australia	131126
		: New Zealand	0800 764 766

Date of preparation or last revision of the SDS	26 October 2016
Prepared by	Glenn Bowring B App Sc (App Chem)
Additional information	

Key/legend to abbreviations and acronyms used in the SDS.

ADG	Australian Code for the Transport of Dangerous Goods by Road and Rail
ACGIH	American Conference of Governmental Industrial Hygienists
ASCC	Australian Safety and Compensation Council
Carcinogen Category Number	1. Established human carcinogen 2. Probably human carcinogen 3. Substances suspected of having carcinogenic potential
Code AICS	Australian Inventory of Chemical Substances
CAS number	Chemical Abstracts Service Registry Number
EPG	Emergency Procedure Guide (superseded by IERG)
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IERG	HB 76-2004 Dangerous goods - Initial Emergency Response Guide
IMDG	International Maritime Dangerous Goods. A uniform code for transport of dangerous goods at sea.
LEL	lower flammable (explosive) limits in air;
LD_{50}	Lethal Dose sufficient to kill 50% of test population
NIOSH	National Institute for Occupational Safety and Health The United States federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness.
NOAEL	No Observed Adverse Effect Level
NOEL	No Observable Effect Level
NOHSC	National Occupational Health and Safety Commission
NTP	National Toxicology Program (USA)
PEL	Permissible Exposure Limit
RTECS	Registry of Toxic Effects of Chemical Substances (Symyx Technologies')
TCL_O	Toxic Concentration Low
TD_{LO}	Toxic Dose Low : lowest dosage per unit of bodyweight (typically stated in milligrams per kilogram) of a substance known to have produced signs of toxicity in a particular animal species.
TLV	Threshold Limit Value (ACGIH):The time weighted average used to describe exposure which is harmless to most of the population when exposed 8 hours per day, 40 hours per week.
TWA	(Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week. 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.
SAFEWORK	Independent statutory agency with primary responsibility to improve occupational health and safety and workers' compensation arrangements across Australia.
STEL	(Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UEL	upper flammable (explosive) limits in air;
UN Number	United Nations Number
Literature references.	
Sources for data.	Safety Data Sheets from Suppliers Hazardous Substances Information System (HSIS)– ASCC Australia (on-line) GHS (Globally Harmonised System of Substance Classification & Labelling) REACH (European Chemical Substance Information System) ADG Code 7th Edition SUSMP Nº 13

DISCLAIMER:

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Canning Laboratories. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request. Focus Products Pty Ltd however makes no warranty whatsoever, expressed, implied or of merchantability regarding the accuracy of such data or the results to be obtained from the use thereof and assumes no responsibility for injury to buyer or third persons or for any damage to property. Buyer assumes all risks.