A: 43 Clapham Road, Regents Park NSW 2143
P: (02) 9645 4433
F: (02) 9645 4030
E: info@chlorinediscounters.com.au
W: www.chlorinediscounters.com.au

SAFETY DATA SHEET – Sulphuric Acid 35%

1. IDENTIFICATION

Revision Date	July 2023 (*valid for 5 years from this date)*
Product Name	Sulphuric Acid 35%
Other Names	Dihydrogen Sulfate; Sulphuric Acid <51%
Uses	GENERAL CHEMICAL - ACID
Contact Information	Chlorine Discounters Address: 43 Clapham Road, Regents Park NSW 2143 P: 02-96454433 F: 02-96454030 E: info@chlorinediscounters.com.au W: www.chlorinediscounters.com.au
Emergency Contact	Managing Director or Operations Manager

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)	6
Globally Harmonised System	
Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Hazard Categories	Corrosive to Metals - Category 1 Skin Corrosion/Irritation - Category 1A
Pictograms	
Signal Word	Danger
Hazard Statements	H290 May be corrosive to metals.

	H314	Causes severe skin burns and eye damage.
Precautionary Statements		
Prevention	P234	Keep only in original container.
	P264	Wash exposed skin thoroughly after handling.
	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): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
	P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	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	P405	Store locked up.
Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.
National Transport Commission (Australia)		Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
Dangerous Goods Classification		Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	CAS Number	Proportions (%)
Sulphuric Acid	7664-93-9	>10.0 - 51.0 %
WATER	[7732-18-5]	Balance

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed If swallowed, do NOT induce vomiting. Seek medical attention immediately. For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once).

Eye	If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor.
Inhaled	If inhaled, remove from contaminated area. To protect rescuer, use a Full-face Type B (Inorganic and acid gas) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient. Can cause corneal burns**.**
Medical Conditions Aggravated by Exposure	No information available on medical conditions aggravated by exposure to this product.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, remove containers from the path of fire. Evacuate area and contact emergency services.
Flammability Conditions	Product is a non-flammable liquid.
Extinguishing Media	For large fires, flood fire area with large quantities of water while knocking down vapours with water fog. If there is insufficient water supply, knock down vapours only. For small fires, use Carbon dioxide, dry chemical, dry sand or flooding quantities of water. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. If tanks or containers are involved in the fire, cool them with copious quantities of water until well after the fire is out. Do not allow water to get inside tanks or containers. Withdraw immediately from the fire area if the tanks discolour or there is a rising sound from the safety vents. Stay away from tank ends. Use an extinguishing agent suitable for the surrounding fire including water spray, foam, carbon dioxide or dry chemical powder.
Fire and Explosion Hazard	The product is non-combustible but will support combustion of other materials and may emit toxic fumes including those of sulphuric acid fumes and sulphur dioxide. The packaging material may burn to emit noxious fumes. Reacts with most common metals to liberate hydrogen which can form explosive mixtures with air.
Hazardous Products of Combustion	Sulphur oxides**.**
Special Fire Fighting Instructions	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.
Personal Protective Equipment	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. Please note: Structural fire fighters uniform will provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available

Hazchem Code	2R

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Avoid accidents, clean up immediately. May be slippery when spilt. Eliminate all sources of ignition. Increase ventilation. Isolate the danger area. Use clean, non-sparking tools and equipment. Shut off all possible sources if ignition.
Clean Up Procedures	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. In case of large spill, 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. Neutralise the final traces and flush area with water.
Containment	Stop leak if safe to do so.
Decontamination	To avoid violent reactions, always add acid to water and never water to acid. When cleaning up residual acid after a spill, use copious (flooding) quantities of water from the outset, to provide rapid dilution.
Environmental Precautionary Measures	Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.
Evacuation Criteria	Do not enter area, walk though spilled material or touch damaged containers. Restrict access downwind and for at least 25 metres in other directions, unless appropriate PPE is worn. Ventilate area where possible.
Personal Precautionary Measures	Personnel involved in the clean-up should wear full protective clothing as listed in section listed in section 8.

7. HANDLING AND STORAGE

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. Remove contaminated clothing promptly. Keep contaminated clothing in closed containers. Discard or launder before rewearing. Inform laundry personnel of contaminant's hazards. Do not eat, drink or smoke in work areas. Avoid generating mist or spray. When diluting solution, add material to water in small amounts. Label containers. Empty containers may contain residues which are hazardous. Use smallest possible amounts in designated areas with adequate ventilation. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure.
Storage	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. Materials that react violently with acids should not be stored in the same area. 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 area. Post warning signs when appropriate. Keep storage area separate from populated work areas. This product has a UN classification of 2796 and a Dangerous Goods Class 8 (Corrosive) according to The Australian Code for the Transport of Dangerous Goods By Road and Rail.

Container	Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	The following exposure standard has been established by The Safe Work Australia (SWA); Sulphuric Acid CAS 7664-93-9: TWA = 1 mg/m3 STEL = 3 mg/m3 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. 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 Limits	No information available on biological limit values for this product.
Exposure Limits	No Data Available
Engineering Measures	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. Use a 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 Equipment	RESPIRATOR: Where risk assessment shows air-purifying respirators are appropriate use a Full Face piece Gas Mask/Chemical Cartridge Respirators as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards (AS1715/1716). EYES: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards (AS1336/1337). HANDS: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product (AS2161). HANDS: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. (AS2161). CLOTHING: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. (AS3765/2210). Full contact Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested: Vitoject® (KCL 890 / Aldrich Z677698, Size M) Splash contact Material: Nitrile rubber Minimum layer thickness: 0.2 mm Break through time: 30 min Material tested: Dermatril® P (KCL 743 / Aldrich Z677388, Size M)
Work Hygienic	Practices Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid

Appearance	Liquid
Odour	Slight Odour
Colour	Clear/colourless
pH	<1
Solubility	Completely Soluble 25°C
Vapour Pressure	1.33 hPa (@ 145.8 °C)
Relative Vapour Density	3.39 Air = 1
Boiling Point	No Data Available
Freezing Point	No Data Available
Specific Gravity	1.20 - 1.40
Decomposition Temperature	No Data Available
Density	1.403 g/ml
Vapour Temperature	No Data Available
Viscosity	No Data Available
Melting Point	3 °C
Auto Ignition Temp	No Data Available
Additional Characteristics	Surface tension 55.1 mN/m at 20 °C Relative vapour density 3.39 - (Air = 1.0)
Potential for Dust Explosion	Product is a liquid.
Reactions That Release Gases or Vapours	Reacts with most metals generating flammable/explosive hydrogen gas.
Potential for Dust Explosion	Product is a liquid.

10. STABILITY AND REACTIVITY

General Information	Corrosive liquid. Corrosive to many metals with the liberation of extremely flammable hydrogen gas.
Chemical Stability	Potential for exothermic hazard. Can react violently, releasing heat, when mixed with water and strong alkalis (bases). May evolve flammable, and when confined, explosive hydrogen gas in contact with some metals.
Conditions to Avoid	Avoid heat, sparks, open flames and other ignition sources.
Materials to Avoid	Bases, Halides, Organic materials, Carbides, fulminates, Nitrates, picrates, Cyanides, Chlorates, alkali halides, Zinc salts, permanganates, e.g. Potassium permanganate, Hydrogen peroxide, Azides, Perchlorates., Nitromethane, phosphorous, Reacts violently with:, cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorous(III) oxide, Powdered metals
Hazardous Decomposition Products	This product and its solutions will not burn or support combustion. However, reaction with a number of commonly encountered oxidisable materials (see Reactivity) can generate sufficient heat to ignite nearby combustible materials. Reacts with most metals generating flammable/explosive hydrogen gas. Avoid addition of water to product - generates considerable heat and spattering. Will emit toxic fumes in fire, including sulphuric acid fumes and sulphur dioxide fumes.
Hazardous Polymerisation	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

General Information	No Data Available
Eye Irritant	Extremely corrosive. Can penetrate deeply causing irritation or severe burns depending on the concentration and duration of exposure. In severe cases, ulceration and permanent damage may occur.
Ingestion	Burning of the mouth, throat and oesophagus; vomiting; diarrhoea; collapse and possible death may result. Highly corrosive. Ingestion of large quantities may result in ulceration, unconsciousness, convulsions and death.
Inhalation	Effects of inhaling vapour & mists have not been clearly established. Most references indicate that irritation of the nose, throat and lungs would occur due to the corrosive nature of the product. Highly corrosive - severe irritant. Over exposure may result in mucous membrane irritation of the respiratory tract coughing, bronchitis, ulceration, bloody nose, lung tissue damage, chemical pneumonitis, pulmonary oedema and death.
Skin Irritant	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 with dilute solutions may lead to irritant contact dermatitis.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Eco-toxicity	No ecological information available for this product.
Persistence/Degradability	No information available on persistence/degradability for this product.
Mobility	Sulphuric acid is miscible with water and its dilution will increase the velocity of downward movement in the soil where it may dissolve the soil material.
Environmental Fate	Do NOT allow product to enter waterways, drains or sewers.
Bioaccumulation Potential	No information available on bioaccumulation potential for this product.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	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	Contact a specialist disposal company or the local waste regulator for advice. Wearing the protective equipment detailed above, neutralise to pH 6-8 by SLOW addition to a saturated sodium bicarbonate solution or similar basic solution. Dilute with excess water and flush to drain. Waste disposal should only be undertaken in a well-ventilated area.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG

UN Number	2796
Shipping Name	SULPHURIC ACID with not more than 51% acid
Dangerous Goods Class	8 Corrosive Substances
Subsidiary Risk	Not applicable.
Pack Group	II
Precaution for User	CORROSIVE
Hazchem Code	2R



EPG	37 Toxic And/ Or Corrosive Substances Non-Combustible
Special Provision	Not applicable.

National Transport Commission (Australia)	Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	6
National/Regional Inventories	
Australia (AICS)	Listed

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
tne	tonne
TWA	Time Weighted Average
ug/24H	micrograms per 24 hours
UN	United Nations (number)
wt	weight

This SDS summarises Chlorine Discounters 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 Chlorine Discounters expressly disclaims that the SDS is a representation or guarantee of the chemical specifications for the substance.

Each user should read the SDS 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.