# Rowe Scientific Sulfuric Acid Solutions 150g/L to 500g/L ROWE SCIENTIFIC

Chemwatch Hazard Alert Code: 4

Issue Date: **14/07/2021**Print Date: **14/07/2021**S.GHS.AUS.EN

Chemwatch: **15-7036**Version No: **17.1.8.8** 

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

#### SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### **Product Identifier**

Product name	Rowe Scientific Sulfuric Acid Solutions 150g/L to 500g/L
Chemical Name	Not Applicable
Synonyms	CS0001; CS1004; CS1460; CS1468; CS1492; CS1509; CS1516; CS1527; CS14858; CS14902; CS14903; CS14914; CS14933; CS15115; CB1700; CS1618; CS1627; CS1677; CS0169; CS1584; CS1586; CS14987; CS14991
Proper shipping name	SULPHURIC ACID with not more than 51% acid or BATTERY FLUID, ACID
Chemical formula	Not Applicable
Other means of identification	Not Available

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Laboratory reagent.

#### Details of the supplier of the safety data sheet

Registered company name	ROWE SCIENTIFIC		
Address	11 Challenge Boulevard Wangara WA 6065 Australia		
Telephone	+61 8 9302 1911		
Fax	+61 8 9302 1905		
Website	http://rowe.com.au/		
Email	rowewa@rowe.com.au		

## **Emergency telephone number**

Association / Organisation	ROWE SCIENTIFIC
Emergency telephone numbers	+61 8 9302 1911 (24 Hrs)
Other emergency telephone numbers	Not Available

#### **SECTION 2 Hazards identification**

#### Classification of the substance or mixture

## HAZARDOUS CHEMICAL. DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	S6
Classification [1]	Skin Corrosion/Irritation Category 1A, Serious Eye Damage/Eye Irritation Category 1
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

#### Label elements

Hazard pictogram(s)



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Signal word Danger

## Hazard statement(s)

Causes severe skin burns and eye damage.

## Precautionary statement(s) Prevention

P260	Do not breathe mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P280	Wear protective gloves, protective clothing, eye protection and face protection.

#### Precautionary statement(s) Response

P363 P304+P340	Wash contaminated clothing before reuse.  IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/doctor/physician/first aider.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

#### Precautionary statement(s) Storage

P405 Store locked up.

## Precautionary statement(s) Disposal

P501

Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

#### **SECTION 3 Composition / information on ingredients**

#### **Substances**

See section below for composition of Mixtures

#### **Mixtures**

CAS No	%[weight]	Name	
7664-93-9	15-49	sulfuric acid	
7732-18-5	40-85	water	
Legend:	Legend: 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available		

#### **SECTION 4 First aid measures**

Description of first aid m	easures
Eye Contact	If this product comes in contact with the eyes:  Immediately hold eyelids apart and flush the eye continuously with running water.  Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.  Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.  Transport to hospital or doctor without delay.  Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs:  Immediately remove all contaminated clothing, including footwear.  Flush skin and hair with running water (and soap if available).  Seek medical attention in event of irritation.
Inhalation	<ul> <li>If fumes or combustion products are inhaled remove from contaminated area.</li> <li>Lay patient down. Keep warm and rested.</li> <li>Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>Transport to hospital, or doctor, without delay.</li> </ul>

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#### Ingestion

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

#### Indication of any immediate medical attention and special treatment needed

For acute or short term repeated exposures to strong acids:

- Airway problems may arise from laryngeal edema and inhalation exposure. Treat with 100% oxygen initially.
- PRespiratory distress may require cricothyroidotomy if endotracheal intubation is contraindicated by excessive swelling
- Intravenous lines should be established immediately in all cases where there is evidence of circulatory compromise.
- Strong acids produce a coagulation necrosis characterised by formation of a coagulum (eschar) as a result of the dessicating action of the acid on proteins in specific tissues.

#### INGESTION:

- Immediate dilution (milk or water) within 30 minutes post ingestion is recommended.
- ▶ DO NOT attempt to neutralise the acid since exothermic reaction may extend the corrosive injury.
- Be careful to avoid further vomit since re-exposure of the mucosa to the acid is harmful. Limit fluids to one or two glasses in an adult.
- ▶ Charcoal has no place in acid management.
- ▶ Some authors suggest the use of lavage within 1 hour of ingestion.

#### SKIN:

- Skin lesions require copious saline irrigation. Treat chemical burns as thermal burns with non-adherent gauze and wrapping.
- ▶ Deep second-degree burns may benefit from topical silver sulfadiazine.

#### EYE:

- Eye injuries require retraction of the eyelids to ensure thorough irrigation of the conjuctival cul-de-sacs. Irrigation should last at least 20-30 minutes. DO NOT use neutralising agents or any other additives. Several litres of saline are required.
- Cycloplegic drops, (1% cyclopentolate for short-term use or 5% homatropine for longer term use) antibiotic drops, vasoconstrictive agents or artificial tears may be indicated dependent on the severity of the injury.
- Steroid eye drops should only be administered with the approval of a consulting ophthalmologist).

[Ellenhorn and Barceloux: Medical Toxicology]

#### **SECTION 5 Firefighting measures**

#### **Extinguishing media**

- ► Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

## Special hazards arising from the substrate or mixture

Fire Incompatibility

• Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.

#### Advice for firefighters

Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Use fire fighting procedures suitable for surrounding area.</li> <li>Do not approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> <li>Equipment should be thoroughly decontaminated after use.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Non combustible.</li> <li>Not considered to be a significant fire risk.</li> <li>Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>May emit corrosive, poisonous fumes. May emit acrid smoke.</li> <li>Decomposition may produce toxic fumes of: sulfur oxides (SOx)</li> </ul>
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#### **SECTION 6 Accidental release measures**

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#### Personal precautions, protective equipment and emergency procedures

See section 8

#### **Environmental precautions**

See section 12

#### Methods and material for containment and cleaning up

	<ul> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Control personal contact with the substance, by using protective equipment.</li> </ul>
Minor Spills	Contain and absorb spill with sand, earth, inert material or vermiculite.  Wipe up.  Place in a suitable, labelled container for waste disposal.
Major Spills	<ul> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear full body protective clothing with breathing apparatus.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Stop leak if safe to do so.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Neutralise/decontaminate residue (see Section 13 for specific agent).</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</li> <li>After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

#### **SECTION 7 Handling and storage**

Safe handling

## Precautions for safe handling

- Avoid all personal contact, including inhalation.
- ► Wear protective clothing when risk of exposure occurs.
- ▶ Use in a well-ventilated area.
- WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- ► When handling, **DO NOT** eat, drink or smoke.
- ► Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- ▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

## Store in original containers.

- Keep containers securely sealed.
- ► Store in a cool, dry, well-ventilated area.
- ▶ Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

## Conditions for safe storage, including any incompatibilities

Suitable container

Other information

▶ Glass container is suitable for laboratory quantities

Storage incompatibility

Segregate from alkalies, oxidising agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.















X — Must not be stored together

- May be stored together with specific preventions
- + May be stored together

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Note: Depending on other risk factors, compatibility assessment based on the table above may not be relevant to storage situations, particularly where large volumes of dangerous goods are stored and handled. Reference should be made to the Safety Data Sheets for each substance or article and risks assessed accordingly.

#### **SECTION 8 Exposure controls / personal protection**

#### **Control parameters**

Occupational Exposure Limits (OEL)

#### **INGREDIENT DATA**

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	sulfuric acid	Sulphuric acid	1 mg/m3	3 mg/m3	Not Available	Not Available

#### **Emergency Limits**

Ingredient	TEEL-1	TEEL-2	TEEL-3
sulfuric acid	Not Available	Not Available	Not Available

Ingredient	Original IDLH Revised IDLH	
sulfuric acid	15 mg/m3	Not Available
water	Not Available	Not Available

#### **Exposure controls**

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

## Appropriate engineering controls

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

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## Personal protection Chemical goggles. Full face shield may be required for supplementary but never for primary protection of eyes. ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should Eye and face protection include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eve redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] Skin protection See Hand protection below Wear chemical protective gloves, e.g. PVC. Hands/feet protection Wear safety footwear. **Body protection** See Other protection below Overalls. PVC Apron. Other protection PVC protective suit may be required if exposure severe. Ensure there is ready access to a safety shower.

#### Respiratory protection

Type E-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	E-AUS P2	-	E-PAPR-AUS / Class 1 P2
up to 50 x ES	-	E-AUS / Class 1 P2	-
up to 100 x ES	-	E-2 P2	E-PAPR-2 P2 ^

#### ^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Appearance	Clear colourless acidic liquid; mixes with water.		
Physical state	Liquid	Relative density (Water = 1)	1.1-1.3
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	<1	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available

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Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Applicable

#### **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	<ul> <li>Unstable in the presence of incompatible materials.</li> <li>Product is considered stable.</li> <li>Hazardous polymerisation will not occur.</li> <li>Contact with alkaline material liberates heat</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

#### **SECTION 11 Toxicological information**

#### Information on toxicological effects

Inhaled	d Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness.  High concentrations cause inflamed airways and watery swelling of the lungs with oedema.	
Ingestion	Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident.	
Skin Contact	Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue.  Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.	
Еуе	Causes severe burns.  Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely.	
Chronic	Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs.  Strong inorganic acid mists containing sulfuric acid can cause cancer.	

Rowe Scientific Sulfuric	TOXICITY	IRRITATION
Acid Solutions 150g/L to 500g/L	Not Available	Not Available
	TOXICITY	IRRITATION
sulfuric acid	Inhalation(Mouse) LC50; 0.85 mg/l4h <sup>[1]</sup>	Eye (rabbit): 1.38 mg SEVERE
	Oral(Rat) LD50; >300 mg/kg <sup>[1]</sup>	Eye (rabbit): 5 mg/30sec SEVERE
	TOXICITY	IRRITATION
water	Oral(Rat) LD50; >90000 mg/kg <sup>[2]</sup>	Not Available
Legend:	Nalue obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS.     Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances	

Occupational exposures to strong inorganic acid mists of sulfuric acid:

#### **SULFURIC ACID**

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases.

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The disorder is characterized by difficulty breathing, cough and mucus production. WARNING: For inhalation exposure ONLY: This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS WATER No significant acute toxicological data identified in literature search. **Acute Toxicity** Carcinogenicity Skin Irritation/Corrosion Reproductivity Serious Eye STOT - Single Exposure Damage/Irritation Respiratory or Skin STOT - Repeated Exposure × × sensitisation Mutagenicity **Aspiration Hazard** 

> Legend: 🗶 – Data either not available or does not fill the criteria for classification Data available to make classification

#### **SECTION 12 Ecological information**

#### **Toxicity**

Rowe Scientific Sulfuric	Endpoint	Test Duration (hr)	Species	Value	Source
Acid Solutions 150g/L to 500g/L	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	NOEC(ECx)	Not Available	Crustacea	0.15mg/l	2
sulfuric acid	EC50	72h	Algae or other aquatic plants	2.56mg/l	2
	LC50	96h	Fish	0.75mg/l	2
	EC50	48h	Crustacea	3.05mg/l	2
	Endpoint	Test Duration (hr)	Species	Value	Source
water	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	3. EPIWIN Su	ite V3.12 (QSAR) - Aquatic Toxicity	ECHA Registered Substances - Ecotoxico Data (Estimated) 4. US EPA, Ecotox datal TE (Japan) - Bioconcentration Data 7. ME	base - Aquatic Toxicity Da	ata 5.

Prevent, by any means available, spillage from entering drains or water courses.

DO NOT discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
water	LOW	LOW

#### **Bioaccumulative potential**

Ingredient	Bioaccumulation
	No Data available for all ingredients

#### Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

#### **SECTION 13 Disposal considerations**

#### Waste treatment methods

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## Product / Packaging disposal

- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- ► Consult State Land Waste Management Authority for disposal.
- ▶ Treat and neutralise at an effluent treatment plant.
- Use soda ash or slaked lime to neutralise.
- ▶ Recycle containers, otherwise dispose of in an authorised landfill.

## **SECTION 14 Transport information**

#### **Labels Required**



2R

HAZCHEM

## Land transport (ADG)

UN number	2796		
UN proper shipping name	SULPHURIC ACID with not more than 51% acid or BATTERY FLUID, ACID		
Transport hazard class(es)	Class 8 Subrisk Not Applicable		
Packing group	II		
Environmental hazard	Not Applicable		
Special precautions for user	Special provisions Not Applicable Limited quantity 1 L		

## Air transport (ICAO-IATA / DGR)

UN number	2796			
UN proper shipping name	Sulphuric acid with 51% or less acid; Battery fluid, acid			
Transport hazard class(es)	ICAO/IATA Class	8		
	ERG Code	brisk Not Applicable 8L		
Packing group	П			
Environmental hazard	Not Applicable			
	Special provisions		Not Applicable	
	Cargo Only Packing Instructions		855	
Special precautions for user	Cargo Only Maximum Qty / Pack		30 L	
	Passenger and Cargo Packing Instructions		851	
	Passenger and Cargo Maximum Qty / Pack		1 L	
	Passenger and Cargo Limited Quantity Packing Instructions		Y840	
	Passenger and Cargo Limited Maximum Qty / Pack		0.5 L	

## Sea transport (IMDG-Code / GGVSee)

UN number	2796		
UN proper shipping name	SULPHURIC ACID with not more than 51% acid or BATTERY FLUID, ACID		
Transport hazard class(es)	IMDG Class IMDG Subrisk	8 Not Applicable	
Packing group	П		
Environmental hazard	Not Applicable		

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Special precautions for	or
us	er

EMS Number	F-A , S-B
Special provisions	Not Applicable
Limited Quantities	1 L

#### Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

#### Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
sulfuric acid	Not Available
water	Not Available

## Transport in bulk in accordance with the ICG Code

Product name	Ship Type
sulfuric acid	Not Available
water	Not Available

#### **SECTION 15 Regulatory information**

#### Safety, health and environmental regulations / legislation specific for the substance or mixture

#### sulfuric acid is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project - Chemicals of High Concern List

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

#### water is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

#### **National Inventory Status**

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (sulfuric acid; water)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

#### **SECTION 16 Other information**

Revision Date	14/07/2021
Initial Date	30/05/2008

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#### **SDS Version Summary**

Version	Date of Update	Sections Updated
16.1.1.1	03/09/2020	Classification change due to full database hazard calculation/update.
16.1.2.1	27/04/2021	Regulation Change
16.1.3.1	04/05/2021	Regulation Change
16.1.4.1	07/05/2021	Regulation Change
16.1.5.1	11/05/2021	Regulation Change
16.1.5.2	30/05/2021	Template Change
16.1.5.3	04/06/2021	Template Change
16.1.5.4	05/06/2021	Template Change
16.1.6.4	08/06/2021	Regulation Change
16.1.6.5	09/06/2021	Template Change
16.1.6.6	11/06/2021	Template Change
16.1.6.7	15/06/2021	Template Change
16.1.7.7	18/06/2021	Regulation Change
16.1.8.7	22/06/2021	Regulation Change
16.1.8.8	05/07/2021	Template Change
17.1.8.8	14/07/2021	Classification, Name

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### **Definitions and abbreviations**

 ${\sf PC-TWA: Permissible \ Concentration-Time \ Weighted \ Average}$ 

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit $_{\circ}$ 

IDLH: Immediately Dangerous to Life or Health Concentrations

ES: Exposure Standard
OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index

AIIC: Australian Inventory of Industrial Chemicals

DSL: Domestic Substances List NDSL: Non-Domestic Substances List

IECSC: Inventory of Existing Chemical Substance in China

EINECS: European INventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

NLP: No-Longer Polymers

ENCS: Existing and New Chemical Substances Inventory

KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals

PICCS: Philippine Inventory of Chemicals and Chemical Substances

TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory

INSQ: Inventario Nacional de Sustancias Químicas

NCI: National Chemical Inventory

FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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