Infosafe No™ 3CHCB Issue Date :August 2022 RE-ISSUED by AMBERSCI

Product Name **SULPHURIC ACID 0.1-4.9%**

Classified as hazardous

Section 1 - Identification

Product Identifier SULPHURIC ACID 0.1-4.9%

Company Name AMBER SCIENTIFIC PTY LTD

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Emergency Phone Number CHEMCALL (24 hours): 1800 127 406 (Australia) / +64-4-917-98888 (International)

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

Other Names

Name	Product Code
SULPHURIC ACID 1%	SULP1
SULPHURIC ACID 3%	SULP3

Other Information Amber Scientific Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Amber Scientific Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Amber Scientific Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Section 2 - Hazard(s) Identification

GHS Classification of the Substance/Mixture Corrosive to Metals: Category 1

Signal Word WARNING

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

Pictogram (s) Corrosion

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 to an approved waste disposal plant.

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
Water	7732-18-5	95-99.9 %
Sulphuric acid	7664-93-9	0.1-4.9 %

Section 4 - First Aid Measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Wash contaminated clothing before re-use. Seek medical advice.
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. Seek medical advice if effects persist.
First Aid Facilities	Maintain eyewash fountain and normal washroom facilities in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

Section 5 - Firefighting Measures

Hazards from Combustion Products	Irritating and highly toxic fumes and gases, including toxic oxides of sulfur (SOx). Contact with most metals (such as aluminium, tin, lead and zinc) causes formation of flammable and explosive hydrogen gas (H2). However, the risk is reduced due to the weaker concentration of sulfuric acid present.
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.
Specific Hazards Arising from the Chemical	Material does not burn. Runoff may pollute waterways.
Hazchem Code	2R
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

Section 6 - Accidental Release Measures

Spills & Disposal	Neutralize with dilute sodium hydroxide, lime or sodium carbonate.
Personal Precautions	Avoid inhalation, contact with skin, eyes and clothing.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Absorb or contain liquid with sand, earth or spill control material. Shovel up using non sparking tools and place in a labelled, sealable container for subsequent safe disposal. Put leaking containers in a labelled drum or overdrum.
Environmental Precautions	Prevent from entering into drains, ditches, rivers or the sea.

Section 7 - Handling and Storage

Precautions for Safe Handling	Avoid contact with eyes, skin, or clothing. May corrode metallic surfaces.
Conditions for safe storage, including any incompatibilities	Store in tightly closed containers, in a cool, dry, well-ventilated area away from incompatible substances.
Corrosiveness	Corrosive in presence of aluminium, zinc, stainless steel(304), stainless steel(316), copper. Moderate corrosive effect on bronze.
Storage Regulations	Refer Australian Standard AS 3780-2008 'The storage and handling of corrosive substances'.
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limit (OEL) Values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Sulphuric acid	3		1		

Other Exposure Information

These Workplace 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 workplace 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.
A time weighted average (TWA) has been established for Sulphuric acid (Safe Work Aust) of 1 mg/m³. The corresponding STEL level is 3 mg/m³. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. 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.

Engineering Controls

Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

Respiratory Protection

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.

Eye and Face Protection

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.

Hand Protection

Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.

Personal Protective Equipment

Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

Footwear

Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

Body Protection

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.

Hygiene Measures

Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Section 9 - Physical and Chemical Properties

Form Liquid

Appearance Clear, colourless liquid.

Odour Odourless.

Melting Point	May start to solidify at -0.1 °C based on data for: water.
Boiling Point	~100°C
Solubility in Water	Miscible.
Solubility in Organic Solvents	Insoluble in methanol, diethyl ether, n-octanol (0.5%).
Specific Gravity	Approx. 1
pH	Acidic; pH of 0.01 N solution (~0.05%): 2.1; pH of 0.1 N solution (~0.5%): 1.2; pH of 1.0 N solution (~5.0%): 0.3.
Flammability	Non combustible material.
Molecular Weight	Sulfuric acid 98.08

Section 10 - Stability and Reactivity

Chemical Stability	Stable under normal temperatures, pressures and conditions of use and storage.
Possibility of Hazardous Reactions	Flammable hydrogen gas is generated by the action of the acid on most metals (i.e. lead, copper, tin, zinc, aluminium, etc.). Reacts with alkali metals and alkaline earth metals.
Conditions to Avoid	Metals, excess heat, extremes of temperature, direct sunlight, combustible materials, organic materials, oxidizers, amines, bases, and incompatible materials.
Incompatible Materials	Alkali metals, alkaline earth metals, alkali compounds, ammonia, alkali hydroxide solutions, metals, metal alloys, organic solvents, permanganates.
Hazardous Decomposition Products	Irritating and highly toxic fumes and gases, including toxic oxides of sulfur (SOx). Contact with most metals (such as aluminium, tin, lead and zinc) causes formation of flammable and explosive hydrogen gas (H2). However, the risk is reduced due to the weaker concentration of sulfuric acid present.
Hazardous Polymerization	Will not occur.

Section 11 - Toxicological Information

Toxicology Information	No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. If mishandled or overexposed to this product the following symptoms or effects may occur.
Ingestion	Ingestion of this product may cause irritation and possible burns of mucous membranes in the mouth, pharynx, oesophagus, and gastrointestinal tract, causing nausea, vomiting and diarrhoea.
Inhalation	Inhalation of product vapours may cause irritation to the mucous membranes of the nose, throat and respiratory system, with sore throat, coughing, and shortness of breath.
Skin	May causes irritation to skin and mucous membranes. Symptoms may include redness, itching, and pain.
Skin Corrosion/Irritation	Not classified based on available information.
Eye	Direct contact with eyes may cause temporary irritation. Symptoms may include tearing, blurred vision, redness, stinging, and pain.
Serious Eye Damage/Irritation	Not classified based on available information.
Respiratory Sensitisation	Not classified based on available information.
Skin Sensitisation	Not classified based on available information.
Germ Cell Mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive Toxicity	Not classified based on available information.

STOT - Single Exposure	Not classified based on available information.
STOT - Repeated Exposure	Not classified based on available information.
Mutagenicity	Not classified based on available information.

Section 12 - Ecological Information

Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention.
Ecotoxicity	Harmful effect due to pH shift. Quantitative data on the ecological effect of this product are not available. The following applies to sulfuric acid in general: Harmful effect on aquatic organisms. Toxic effect on fish and algae. Caustic even in diluted form. Does not cause biological oxygen deficit. Endangers drinking-water supplies if allowed to enter soil and/or waters in large quantities. Neutralisation possible in waste water treatment plants.
Bioaccumulative Potential	An enrichment in organisms should not be expected.
Short Summary of Assessment of Environmental Impact	When released into the soil, this material may leach into groundwater. When released into the air, this material may be removed form the atmosphere to a moderate extent by wet and dry deposition.
Environmental Protection	Do not allow to enter waters, waste water, or soil!
Acute Toxicity - Daphnia	Daphnia magna EC50: 29 mg/l /24 h (pure substance).

Section 13 - Disposal Considerations

Disposal Considerations	Dispose of according to relevant local, state and federal government regulations.
Waste Disposal	Neutralise remaining product with lime, soda ash or sodium bicarbonate, adjusting pH to 6-8. Flush to sewer as greatly diluted solution.

Section 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 alkalis and Class 7.
ADG UN Number	2796
ADG Proper Shipping Name	SULFURIC ACID
ADG Transport Hazard Class	8
ADG Packing Group	II
Hazchem Code	2R
EPG Number	8A1
IERG Number	37
Additional information	There is a possibility that this product could be contained in a reagent set or kit composed of various compatible dangerous goods. If the item is not in a reagent set or kit, the classification given above applies. If the item is part of a reagent set or kit the classification would change to the following: UN3316 Chemical Kit, Hazard Class 9, Packing Group II or III. If the item is not regulated, the Chemical Kit classification does not apply.

Section 15 - Regulatory Information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S6

Section 16 - Any Other Relevant Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand. Safe Work Australia, 'Hazardous Chemical Information System'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment'.
Contact Person/Point	Amber Scientific Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Amber Scientific Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Amber Scientific Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.
Empirical Formula & Structural Formula	H_2SO_4 + aqua

...End Of MSDS...