

Material Safety Data Sheet

SULPHURIC ACID

Infosafe No. AJ1YR **Issue Date** July 2002 **Status** ISSUED by APSSC

Classified as hazardous according to criteria of NOHSC

COMPANY DETAILS

Company Name APS, A Division of Nuplex Industries (Aust) Pty Ltd (ABN 25 000 045 572)
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NSW 2147

Emergency Tel. 1800 022 037 (24H)
Tel/Fax Tel: (02) 9839 4000 Fax: (02) 9674 6225
Other Information New Zealand: Asia Pacific Specialty Chemicals (NZ) Limited
119 Carbine Road
Mt Wellington, Auckland 6
Emergency Tel: 0800 154 666 (24H)
Telephone: (09) 276 4019
Fax: (09) 276 7231

IDENTIFICATION

Product Code AR 00000534
Product Name SULPHURIC ACID
Proper Shipping Name SULFURIC ACID
Other Names Not Available
UN Number 1830
DG Class 8
Packing Group II
Hazchem Code 2P
Poisons Schedule S6
Product Use Fertilizers, explosives, electroplating, dyes, drugs, detergents, adhesives, plastics, paints, tanning, food processing.

Physical Data

Appearance Colourless (pure) to brownish liquid, denser than water, choking fumes if heated, hygroscopic.
Melting

Point	10 degrees C
Boiling Point	270 degrees C
Vapour Pressure	< 0.001 mm Hg at 20 degrees C
Specific Gravity	approx 1.5 - 1.83
Flash Point	No Data
Flamm. Limit LEL	No Data

Other Properties

pH Value	0.3, 1N solution
Formula	H2SO4
Molecular Weight	98.08
Other Information	Soluble in water in all proportions, soluble in most organic solvents (may react).

Ingredients

Ingredients	Name	CAS	Proportion
	Sulphuric acid	7664-93-9	0-98 %
	Water to make total of 100%		

HEALTH HAZARD INFORMATION

Health Effects

Acute - Swallowed	Can kill if swallowed. Will cause severe damage to the mucous membranes. May cause severe burns to the mouth,throat and stomach. Ingestion can cause nausea and vomiting. Ingestion can result in abdominal pain.
Acute - Eye	Corrosive to eyes; contact can cause corneal burns. Permanent eye damage,including loss of sight,may occur.
Acute - Skin	Highly corrosive to skin. Causes severe burns.
Acute - Inhaled	Harmful by inhalation. Possible harmful corrosive effects. High concentrations of vapour can cause severe irritation of the respiratory tract.

Hazards Identification

First Aid

Swallowed	Rinse mouth thoroughly with water immediately. Give water to drink. DO NOT induce vomiting. Seek immediate medical assistance. Poison Information Centres in each State capital city can provide additional assistance for scheduled poisons.
Eye	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.

Skin	Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and wash before re-use. Treat skin and clothing with 1% sodium bicarbonate solution to neutralize acid residues. If irritation occurs seek medical advice.
Inhaled	Remove victim from exposure - avoid becoming a casualty. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek medical attention.

Advice to Doctor

Advice to Doctor	Consult Poisons Information Centre. Treat symptomatically as for strong acids.
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Other Health Hazard Information

PRECAUTIONS FOR USE

Exposure Limits	Name	STEL (mgm3)	STEL (ppm)	TWA (mgm3)	TWA (ppm)	FootNote
	Sulphuric acid	3		1		

Other Exposure Info. Eng. Controls	TLV/TWA: 1 mg/m ³ , STEL: 3 mg/m ³ Worksafe Aust. Odour Threshold: >1 mg/m ³ IDLH Value: 80 mg/m ³ Maintain concentration below recommended exposure limit. Use with local exhaust ventilation or: Combination particulate/gas respirator, Class B, (Inorganic vapour). Self contained breathing apparatus may be needed for prolonged periods of exposure.
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Personal Protection

Protective Equip.	The following personal protective equipment must be worn. Overalls or similar protective apparel. Safety glasses, goggles or faceshield as appropriate. Rubber boots. Elbow-length PVC gloves. Splash apron. Wash contaminated clothing and protective equipment before storing/re-using. Avoid all contact.
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Flammability

Fire Hazards	The product is considered non-combustible. Its other hazardous properties should however be considered if it is involved in a fire. Contact with moisture or water may generate heat. Contact with strong alkalis may generate heat.
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Other Precautions	Prolonged exposure to mists and vapours can cause erosion of teeth, chronic irritation of eyes, nose and throat and chronic inflammation of airways. 77 - 98% acid causes 2nd and 3rd degree burns of skin on short contact and is very injurious to the eyes. In October 1992 the International Agency for Research on Cancer (IARC)
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classified occupational exposure to strong inorganic acid mists containing sulphuric acid as carcinogenic to humans, ie a Group 1 carcinogen. Further information can be obtained from N.S.W WorkCover Authority publication dated September 1993.

SAFE HANDLING INFORMATION

Storage and Transport

Storage	Store in well ventilated area.
Precautions	Store in a cool,dry place. Keep dry - reacts with water; may lead to drum rupture. Keep containers securely sealed and protected against physical damage. Store away from strong bases. Not to be loaded with Class 1, 4.3, 5.1, 5.2, 6*,7, Foodstuff and foodstuff empties. (* where the Class 6 substance is a cyanide and the Class 8 substance is an acid).
Other Storage Info.	Corrosive to most metals in the presence of moisture, liberating hydrogen gas, (potential explosion). Reacts violently or explosively with a wide range of organic and inorganic chemicals, including water, alcohol, carbides, chlorates, picrates, nitrates, metals and other combustibles.
Proper Shipping Name	SULFURIC ACID
EPG Number	8A2
IERG Number	40
Packaging Method	3.8.8RT8

Spills and Disposal

Spills & Disposal	Shut off all possible sources of ignition. Clear area of all unprotected personnel. Contain using sand and earth - prevent run-off into drains and waterways. For large spills notify Emergency Services. In the event of a small spill: Neutralise remaining product with lime or soda ash, adjusting pH to 6-10. Flush to sewer as a greatly diluted solution. Wear full protective clothing (see Personal Protection/Ventilation Section) .Self contained breathing apparatus may be needed for prolonged periods of exposure. Refer to appropriate State Waste Disposal Authority Observe local regulations.
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Fire/Explosion Hazard

Fire/Explos. Hazard	Decomposes on heating emitting toxic fumes. Oxides of sulphur Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of decomposition. Reacts violently with water.
Hazchem Code	2P

OTHER INFORMATION

Toxicology	Oral LD50(rat): 2140 mg/kg
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Environment Protection	Highly toxic to aquatic life. Avoid contaminating waterways. The product is strongly acidic and hence may react with metals to produce hydrogen, a flammable gas.
Risk Statement	R35 Causes severe burns.
Safety Statement	S2 Keep out of reach of children. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S30 Never add water to this product. S24/25 Avoid contact with skin and eyes.
Pkg. & Labelling Hazard Category	As required by the ADG Code and the Standard for the Uniform Scheduling of Drugs and Poisons. Corrosive
Manufacturers Advice	Dilution of acid should always be carried out by slowly adding acid to water with constant stirring. Concentrated acid reacts violently with water, generating heat and causing splattering. In the case of fire, use extinguisher appropriate for burning material. Water used on adjacent fires must be carefully handled if acid has spilt.
References Empirical Formula & Structural Formula Other Information	CCINFO, CHRIS H2SO4 Sulphuric acid: with more than 51% acid, Group text EPG 8A2

CONTACT POINT

Contact	Australia: Business Hours: Mr Paul Verren Telephone: (02) 9839 4024 Emergency Tel: 1800 022 037 New Zealand: Business Hours: Mr Lloyd Williams Telephone: (09) 276 4019 Emergency Tel: 0800 154 666
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IMPORTANT ADVICE: 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 Nuplex Industries (Aust) Pty Ltd. 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.

End of MSDS