

# Safety Data Sheet



## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** **SULFURIC ACID WITH MORE THAN 51% ACID**

**Other name(s):** Sulfuric Acid Commercial - 60%, 70%, 72%, 72.9%, 77%, 78%, 91.7%, 98%, 98.5%; Alkylation Acid; Oil of Vitriol; Dipping Acid; Sulphuric Acid Concentrated; Sulfuric acid 1:1

**Recommended use of the chemical and restrictions on use:** Manufacture of fertilisers, explosives, battery acid, dyes, drugs, detergents, adhesives, plastics and paints, in electroplating, in tanning, and in purification of petroleum.

**Supplier:** Ixom Operations Pty Ltd  
**ABN:** 51 600 546 512  
**Street Address:** Level 8, 1 Nicholson Street  
Melbourne 3000  
Australia

**Telephone Number:** +61 3 9665 7111  
**Facsimile:** +61 3 9665 7937  
**Emergency Telephone:** **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

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.

**Classification of the substance or mixture:**

Corrosive to Metals - Category 1  
Skin Corrosion - Sub-category 1A  
Eye Damage - Category 1  
Specific target organ toxicity (single exposure) - Category 3

**SIGNAL WORD:** DANGER



**Hazard Statement(s):**

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H335 May cause respiratory irritation.

**Precautionary Statement(s):**

**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.

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## Response:

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.  
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.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P321 Specific treatment (see First Aid Measures on Safety Data Sheet).  
P363 Wash contaminated clothing before re-use.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
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.

**Poisons Schedule (SUSMP):** S6 Poison.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Components    | CAS Number | Proportion | Hazard Codes     |
|---------------|------------|------------|------------------|
| Sulfuric acid | 7664-93-9  | >51%       | H290, H314, H318 |
| Water         | 7732-18-5  | to 100%    | -                |

## 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.

### Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

### 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.

### Eye Contact:

SPEED IS ESSENTIAL. Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

### Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

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

Treat symptomatically. Can cause corneal burns.

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## 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).

**Hazchem or Emergency Action Code:** 2P

### Specific hazards arising from the substance or mixture:

Corrosive substance. Non-combustible material.

### Special protective equipment and precautions for fire-fighters:

Decomposes on heating emitting toxic fumes, including those of oxides of sulfur. 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.

## 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). Neutralise with lime or soda ash. Collect and seal in properly labelled containers or drums for disposal. Use water spray to disperse vapour. DO NOT use sawdust. Wash area down with excess water.

## 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 foodstuffs. Store away from incompatible materials described in Section 10. Keep dry - reacts with water, may lead to drum rupture. Keep containers closed when not in use - check regularly for leaks.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control Parameters:** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Sulfuric acid: 8hr TWA = 1 mg/m<sup>3</sup>, 15 min STEL = 3 mg/m<sup>3</sup>

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As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

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.

## Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. Keep containers closed when not in use.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

## 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, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.



Wear overalls, chemical goggles, face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|   |                      |
|---|----------------------|
| <b>Physical state:</b>                  | Liquid               |
| <b>Colour:</b>                          | Colourless to Brown  |
| <b>Odour:</b>                           | Slight               |
| <b>Solubility:</b>                      | Miscible with water. |
| <b>Specific Gravity:</b>                | 1.5-1.85             |
| <b>Relative Vapour Density (air=1):</b> | Not available        |
| <b>Vapour Pressure (20 °C):</b>         | <0.0001 kPa          |

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|                                       |                |
|---------------------------------------|----------------|
| <b>Flash Point (°C):</b>              | Not applicable |
| <b>Flammability Limits (%):</b>       | Not applicable |
| <b>Autoignition Temperature (°C):</b> | Not applicable |
| <b>Boiling Point/Range (°C):</b>      | Not available  |
| <b>pH:</b>                            | <1             |

## 10. STABILITY AND REACTIVITY

|  |  |
|--|--|
| <b>Reactivity:</b>                         | Reacts exothermically on dilution with water. Reacts exothermically with strong alkali materials. Corrodes metals.   |
| <b>Chemical stability:</b>                 | Stable.  |
| <b>Possibility of hazardous reactions:</b> | Hazardous polymerisation will not occur. Exothermic reaction with water which may cause violent spattering. Attacks many metals liberating explosive hydrogen gas. |
| <b>Conditions to avoid:</b>                | Avoid contact with foodstuffs. Avoid exposure to moisture. Avoid contact with water.   |
| <b>Incompatible materials:</b>             | Incompatible with oxidising agents, alkalis, some metals, organic chemicals .  |
| <b>Hazardous decomposition products:</b>   | Oxides of sulfur.  |

## 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:

|                      |   |
|----------------------|---|
| <b>Ingestion:</b>    | Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.                                  |
| <b>Eye contact:</b>  | A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury.                        |
| <b>Skin contact:</b> | Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.   |
| <b>Inhalation:</b>   | Breathing in mists or aerosols will produce respiratory irritation. May cause pulmonary edema at high concentrations. Overexposure may result in death. |

**Acute toxicity:** No LD50 data available for the product. For the constituent Sulfuric acid (1):  
Oral LD50 (rat): 2140 mg/kg

**Skin corrosion/irritation:** Severe irritant (rabbit).

**Serious eye damage/irritation:** Severe irritant (rabbit).

**Chronic effects:** No information available for the product. For the component Sulfuric acid: Repeated overexposure may lead to chronic conjunctivitis, lung damage and dental erosion. The International Agency for Research on Cancer (IARC) have concluded that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to humans, causing cancer of the larynx and to a lesser extent, the lung. No direct link has been established with sulfuric acid, itself, and cancer in humans. Exposure to any mist or aerosol during the use of this product should be avoided and exposure should not exceed the exposure standard. (2)

## 12. ECOLOGICAL INFORMATION

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**Ecotoxicity** Avoid contaminating waterways.

**Aquatic toxicity:** Harmful to aquatic organisms.

## 13. DISPOSAL CONSIDERATIONS

### Disposal methods:

Refer to Waste Management Authority. Dispose of contents/container in accordance with local/regional/national/international regulations.

## 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 No:** 1830  
**Transport Hazard Class:** 8 Corrosive  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** SULPHURIC ACID  
**Hazchem or Emergency Action Code:** 2P

### 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 No:** 1830  
**Transport Hazard Class:** 8 Corrosive  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** SULPHURIC ACID

**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 No:** 1830  
**Transport Hazard Class:** 8 Corrosive  
**Packing Group:** II  
**Proper Shipping Name or Technical Name:** SULPHURIC ACID

## 15. REGULATORY INFORMATION

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**Classification of the substance or mixture:**

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Eye Damage - Category 1

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**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.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

## 16. OTHER INFORMATION

(1) 'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2014.

(2) International Agency for Research on Cancer. In: 'IARC Monographs on the Evaluation of Carcinogenic Risk to Humans'. World Health Organisation, 1992.

This safety data sheet has been prepared by Ixom Operations Pty Ltd Toxicology & SDS Services.

**Reason(s) for Issue:**

Revised Primary SDS

Alignment to GHS requirements

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.