# SAFETY DATA SHEET

| PRODUCT NAME: | SULPHURIC ACID 99% |
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Issue Date: 14 November 2025

## SECTION 1: IDENTIFICATION

**Product Name:** Sulphuric Acid
**Other Names:** Dihydrogen Sulphate, Dipping Acid, Oil of Vitriol, Battery Acid
**Product Code:** CSA20, ZSULA, CBA126020, CBA12601, CBA128020, CBA128520
**Uses:** Manufacture of super phosphate fertilizer, inorganic and petro-chemicals, explosives and pigments. Component of heavy-duty metal cleaners and pickles. In manufacture of rayon, cellulose film. As battery electrolyte and also in electroplating processes. pH control additive.
**Restrictions:** Restricted to Workplace only
**Supplier:** HamChem Hamilton Chemicals Ltd, 75 Ruffell Rd, Hamilton
Phone: 079744971 Web: www.hamchem.co.nz Email: info@hamchem.nz

- **In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.**
- **In case of poisoning phone National Poisons Centre – 0800 764 766**

## SECTION 2: HAZARD IDENTIFICATION

**GHS Classifications**
Corrosive to Metals – Category 1
Acute Inhalation Toxicity – Category 4
Skin Corrosion – Category 1B
Serious Eye Damage – Category 1
Carcinogenicity – Category 1
Specific Target Organ Toxicity (Repeated Exposure) – Category 1
Specific Target Organ Toxicity (Single Exposure) – Category 3 (respiratory tract irritation)

**Signal Word:** Danger

**Hazard Statements**
H290 – May be corrosive to metals
H314 – Causes severe skin burns and eye damage
H318 – Causes serious eye damage
H332 – Harmful if inhaled
H350 – May cause cancer
H372 – Causes damage to organs through prolonged or repeated exposure
H335 – May cause respiratory irritation

**Prevention**
P234 – Keep only in original packaging
P260 – Do not breathe dust or mists
P271 – Use only outdoors or in a well-ventilated area
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
P363 – Wash contaminated clothing before reuse
P304 + P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P31 – Immediately call a POISON CENTRE or Doctor
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P310 – IMMEDIATELY call a Poison Centre or Doctor/Physician.
P308 + P313 – If exposed or concerned: Get medical advice/attention
P390 – Absorb spillage to prevent material damage.

**Storage**
P405 – Store locked up
P403 + P233 – Store in a well-ventilated place. Keep container tightly closed

**Disposal**
P501 – Dispose of contents/container in accordance with local/regional/national/international regulations.

## SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS

| Chemical Entity | CAS No. | Proportion (%) |
|---|---|---|
| Sulphuric Acid | 7664-93-9 | 35 (Battery acid) – 98 |
| Water | 7732-18-5 | Balance to 100 |

## SECTION 4: FIRST AID MEASURES

**24 Hour Emergency Contact – 0800 CHEM CALL (0800 243 622)**
**NZ Poisons Information Centre – 0800 POISON (0800 764 766)**
**NZ Emergency Services – 111**

**Inhalation:** Remove victim from area of exposure – avoid becoming a casualty. 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 medical advice.

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

**Skin:** If spilt on large areas of skin or hair, immediately drench with running water and remove contaminated clothing. Continue to wash skin and hair with plenty of water until advised to stop by the Poisons Information Centre or a Doctor. For skin burns – cover with clean, dry dressing until medical help is available.

**Eye:** 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. Urgently seek medical assistance and transport promptly to Hospital or Medical Centre.

**First Aid Facilities:** Eye wash facilities and safety shower should be available.

**Advice to Doctor:** Overexposure may result in severe skin, eye and respiratory burns with permanent lung and tissue damage. Strong inorganic acid mists containing sulphuric acid are classified as carcinogenic to Humans.

**Immediate Medical Attention & Special Treatment Needed:** Corrosive Poisoning Treatment – immediate treatment preferably in a hospital is mandatory. In treating corrosive poisoning, DO NOT induce vomiting, DO NOT attempt gastric lavage, DO NOT attempt to neutralize the corrosive substance. Vomiting will increase the severity of damage to the oesophagus as the corrosive substance will again come in contact with it. Attempting gastric lavage may result in perforating either the oesophagus or stomach. Immediately dilute the corrosive

substance by having the patient drink milk or water. If the trachea has been damaged, tracheostomy may be required. For oesophagal burns begin broad-spectrum antibiotics and corticosteroid therapy. Intravenous fluids will be required if oesophagal or gastric damage prevents ingestion of liquids. Long-range therapy will be directed toward preventing or treating oesophagal scars and strictures.

## SECTION 5: FIRE FIGHTING MEASURES

**Extinguishing media:** Dry chemical, foam or carbon dioxide. Do NOT use water on concentrated sulphuric acid. However, water spray may be used to keep fire exposed containers cool.

**Specific hazards:** Non-flammable. May evolve toxic gases (Sulphur oxides) when heated to decomposition. May evolve flammable hydrogen gas in contact with some metals.

**Decomposition Temperature:** Not available.

**Advice for Firefighters:** Evacuate area and contact emergency services. Toxic gases may be evolved in fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use water fog to cool intact containers and nearby storage areas.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Emergency Procedures:** Wear Personal Protective Equipment (PPE) as detailed in Exposure Controls/Personal Protection section of SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

**Methods and Materials for Containment & Cleaning Up:** Contain spillage, then cover/absorb spill with sodium bicarbonate or 50-50 mixture of sodium carbonate and calcium hydroxide. Collect for complete neutralization and appropriate disposal.

**Environmental Precautions:** Prevent product from entering drains and waterways.

## SECTION 7: HANDLING & STORAGE

**Precautions for Safe Handling:** Do NOT allow clothing wet with material to stay in contact with skin. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure is present. Use in a well-ventilated area. WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material.

**Conditions for safe storage, including any incompatibilities:** Containers – DO NOT use aluminum or galvanised containers. Use lined metal can, lined metal pail/can, plastic pail, poly-liner drum, packing as recommended by manufacturer. Containers for low viscosity materials such as drums and jerry cans must be of the non-removable head type. When a can is to be used as an inner package, the can must have a screwed enclosure.

**Storage:** Check regularly for spills and leaks. Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers.

## SECTION 8: EXPOSURE CONTROLS & PERSONAL PROTECTION

**Exposure standards:** NZ Workplace Exposure Standards (WES) have been set for this substance:

Sulphuric Acid, TWA 0.1mg/$m^3$

**Engineering controls:** Avoid inhalation. Use in well ventilated areas. When an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard.

**Personal protective equipment:**
**Eye/Face** – Safety glasses with unperforated side shields may be used where continuous eye protection is needed, such as when handling bulk quantities, where there is a danger of splashing, or if the material may be under pressure. Chemical goggles – Whenever there is a danger of the material coming into contact with the eyes; goggles must be properly fitted. Full Face Shield – (20cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these give face protection.
Alternatively, a gas mask may replace splash goggles and face shields.

**Hands –** Elbow Length PVC Gloves – Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: frequency and duration of contact, chemical resistance of glove material, glove thickness and dexterity.

**Body –** When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. Wear coveralls – when using large quantities or where heavy contamination is likely, wear rubber boots and a PVC apron. In a laboratory situation, wear a laboratory coat.

**Respiratory –** Where an inhalation risk exists, wear a type B (inorganic gases and vapours) respirator. If spraying, with prolonged use, or if in confined areas, wear an air-line respirator.

## SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

| | |
|---|---|
| **Form:** | Liquid |
| **Appearance:** | Liquid |
| **Colour:** | Colourless to brown |
| **Odour:** | Faint acid odour |
| **Decomposition Temperature:** | Not available |
| **Melting Point:** | Not available |
| **Freezing Point:** | 5°C |
| **Boiling Point:** | 310°C |
| **Specific Gravity:** | 1.84 @ 20°C |
| **pH (1% solution):** | <1 |
| **Vapour Pressure:** | Not available |
| **Vapour Density:** | Not available |
| **Evaporation Rate:** | Not available |
| **Viscosity:** | Not applicable |
| **Volatile Component:** | Not available |
| **Flash Point:** | Not applicable |
| **Auto-Ignition Temperature:** | Not applicable |
| **Explosion Limit – Upper:** | Not available |
| **Explosion Limit – Lower:** | Not available |
| **Molecular Weight:** | Not applicable |

## SECTION 10: STABILITY & REACTIVITY

**Reactivity:** Reacts exothermically on dilution with water. Reacts exothermically with strong alkali materials. Corrodes metals.

**Chemical Stability:** Stable at ambient conditions of use and storage.

**Conditions to Avoid:** Avoid contact with foodstuffs. Avoid exposure to moisture. Avoid contact with water.

**Incompatible Materials:** Avoid contact with foodstuffs. Avoid exposure to moisture. Avoid contact with water.

**Hazardous Decomposition Products:** Releases Sulphur dioxide at extremely high temperatures.

**Possibility of Hazardous Reactions:** Polymerisation is not expected to occur. Exothermic reaction with water which may cause violent splattering. Attacks many metals liberating explosive hydrogen gas.


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## SECTION 11: TOXICOLOGICAL INFORMATION

**Toxicity data:**

Oral (rat) LD50: 2140mg/kg
Inhalation (rat) LC50: 510mg/m³/2h

**Toxicology Information:** No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. The symptoms or effects that may arise if the product is mishandled and if overexposure occurs are:

**Ingestion:** Swallowing can result in nausea, vomiting, diarrhea, abdominal pain, and chemicals burns to the gastrointestinal tract.

**Inhalation:** Breathing in mists or aerosols will produce respiratory irritation. May cause pulmonary oedema at high concentrations. Overexposure may result in death.

**Skin:** Contact with skin will result in severe irritation. Corrosive to skin – may cause skin burns.

**Eye:** A severe eye irritant. Corrosive to eyes; can cause corneal burns. Contamination of eyes can result in permanent injury.

**Health Hazard:** Sulphuric Acid (98% solution) is extremely corrosive, irritating and toxic leading to severe burns and rapid destruction of tissue.

**Chronic Effects:** For the component Sulphuric 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 sulphuric acid is carcinogenic to humans, causing cancer of the Larynx and to a lesser extent, the lung. No direct link has been established with sulphuric 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.

## SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicity (Aquatic & Terrestrial):**
LC50 Flounder: 100 to 330mg/L/48hr
LC50 Shrimp: 80 to 90mg/L/48hr
LC50 Prawn: 42.5ppm/48hr
Sulphuric acid is harmful to aquatic life in very low concentrations. May cause corrosion and deterioration of many common materials found in the environment (e.g. steel, limestone)

**Persistence and Degradability:** No information provided.

**Mobility:** No information provided.

**Bio accumulative Potential:** No information provided.

**Other Adverse Effects:** No information provided.

## SECTION 13: DISPOSAL CONSIDERATIONS

Recycle wherever possible, otherwise ensure that contents/container are disposed of to an approved waste facility in accordance with local, regional and national regulations.

## SECTION 14: TRANSPORT INFORMATION

**UN Number:** 1830
**Proper Shipping name:** Sulphuric Acid >51%
**Dangerous Goods Class:** Class 8 - Corrosive
**Packing group:** II
**Hazchem Code:** 2P

## SECTION 15: REGULATORY INFORMATION

**EPA Approval Number:** HSR001572

**HSNO Classifications:** 6.1D (All), 6.1D (I), 6.1E (O), 6.7A , 6.9A (All), 6.9A (I), 8.1A , 8.2B , 8.3A , 9.1C (C), 9.1D (All), 9.1D (F)

**Restrictions:** Sulphuric Acid >10% (HSR001572) is Restricted to Workplace only, due to the Carcinogenicity – Category 1 classification (6.7A). (Hazardous Substance (Hazardous Property Controls) Notice 2020)

## SECTION 16: OTHER INFORMATION

**Key to abbreviations:**

| | |
|---|---|
| LC50 | Is the concentration which kills half of the test animals under controlled conditions. This value applies to vapours, dusts, mists and gases. |
| LD50 | Is the lowest dose which kills half of the test animals by ingestion. |

**End of SDS.**


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