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SULPHURIC ACID 15-50% SOLUTION				

Section 1 – Chemical Product and Company Identification

1.1. Product identifier:

Sulphuric acid 15-50% solution.

1.2. Relevant identified uses of the substance or mixture and uses advised against:

To be used as a sample preservative for analytical testing.

1.3. Details of the supplier of the safety data sheet:



ALS Laboratories (UK) Limited

Torrington Avenue,
Coventry, CV4 9GU

1.4. Emergency telephone number

T: +44 (0)24 7642 1213

F: +44 (0)24 7685 6575

Section 2 – Hazards Identification

2.1. Classification of the substance or mixture

Skin corrosion (Sub-category 1A), H314

Serious eye damage (Category 1), H318

2.2. Label elements

Pictograms



Signal word: Danger

Hazard statement(s)

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P305 + P351 + P338 +P310 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

Supplemental Hazard Statements: none

Reduced labelling for packages where contents do not exceed 125ml is not applicable.

Section 3 – Composition, Information on Ingredients

3.2. Mixtures

Component	Hazards	Concentration
Sulphuric acid	H314, H318.	15-50%
Water	None.	50-85%

Section 4 – First Aid Measures

4.1. Description of first aid measures

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

4.2. Most important symptoms and effects, both acute and delayed:

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

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Section 5 – Fire Fighting Measures

5.1. Extinguishing media: No data available.

5.2. Special hazards arising from the substance or mixture: Mixtures of sulphuric acid and any of the following can explode: p - nitrotoluene , penta silver trihydroxydiaminophosphate, perchlorates, alcohols with strong hydrogen peroxide, ammonium tetraperoxychromate, mercuric nitrite, potassium chlorate, potassium permanganate with potassium chloride. Nitramide decomposes explosively on contact with concentrated sulphuric acid. 1,3,5-Trinitrosohexahydro-1,3,5-triazine + sulphuric acid causes explosive decomposition. (Sulphuric acid).

5.3. Advice for firefighters: Slightly explosive in presence of oxidizing materials.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures: Protect skin and eyes from spillages. Take care not to inhale vapours.

6.2. Environmental precautions: Prevent spills from entering waterways and sewers.

6.3. Methods and materials for cleaning up: Use a suitable absorbent. Use neutralizing agents if available. Collect into a container, close lid. Dispose as hazardous waste.

6.4. Reference to other sections. See suitable PPE in section 8.

Section 7 – Handling and Storage

7.1 Precautions for safe handling

Avoid inhalation of vapour or mist. Do not ingest. Avoid contact with skin and eyes. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place. Keep away from incompatibles such as oxidizing agents, combustible materials, organic materials, metals, acids, alkalis, moisture. May corrode metallic surfaces.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8 – Exposure Controls, Personal Protection

8.1. Control parameters: Under EH40 (UK) 0.05mg/m³ (TWA).

8.2. Exposure controls: Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit

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value. Ensure that eyewash stations and safety showers are proximal to the work-station location. Personal Protection: Be sure to use an approved/certified respirator or equivalent. Gloves. Boots. Personal Protection in Case of a Large Spill: Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Physical state and appearance: Liquid.

Odour: Odourless.

Taste: Not available.

Colour: Colourless. Clear

pH: Acidic.

Boiling Point: The lowest known value is 100°C (212°F) (Water). Weighted average: 195°C (383°F)

Melting Point: May start to solidify at 10.36°C (50.6°F) based on data for: Sulphuric acid.

Vapour Density: The highest known value is 3.4 (Air = 1) (Sulphuric acid). Weighted average: 2.01 (Air = 1)

Volatility: Not available.

Odour Threshold: Not available.

Solubility: Easily soluble in cold water, hot water.

9.2. Other information

Section 10 – Stability and Reactivity

10.1. Reactivity

Reactive with oxidizing agents, combustible materials, organic materials, metals, acids, alkalis.

Extremely corrosive in presence of aluminum, of stainless steel(304), of stainless steel(316). Non-corrosive in presence of glass.

Incompatible with the following materials: potassium chlorate, potassium perchlorate, potassium permanganate, sodium, lithium, bases, organic material, halogens, metal acetylides, oxides and hydrides, metals as non-powders(yields hydrogen gas), metal compounds, metals as powders, strong oxidizing and reducing agents. Concentrated solutions react violently with water, spattering and liberating heat.

Concentrated acid is non-corrosive to lead and mild steel, but diluted acid attacks most metals. Attacks and corrodes many metals releasing hydrogen. Minor corrosive on bronze. No data for copper, zinc or brass. Polymerization:

10.2. Chemical stability

Stable under normal temperatures and pressures.

10.3. Possibility of hazardous reactions

Hazardous Polymerization: Has not been reported.

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10.4. Conditions to avoid

See section 10.1.

10.5. Incompatible materials

Reactive with oxidizing agents, combustible materials, organic materials, metals, acids, alkalis.

10.6. Hazardous decomposition products

No data available.

Section 11 – Toxicological Information

11.1. Information on toxicological effects:

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact.

Toxicity to Animals: Acute oral toxicity (LD50): 4280 mg/kg (Rat.) (Calculated value for 50% sulphuric acid).

CARCINOGENIC EFFECTS: Not known to cause cancer. Strong inorganic mists containing sulfuric acid are carcinogenic to humans. Has been associated with: cancer of the larynx, lung cancer.

May cause damage to the following organs: the reproductive system, teeth.

Other Toxic Effects on Humans: Extremely hazardous in case of inhalation (lung corrosive). Very hazardous in case of skin contact (irritant), of ingestion. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive).

Special Remarks on Toxicity to Animals: Not available.

Section 12 – Ecological Information

12.1. Toxicity: No data available.

12.2. Persistence and degradability: No data available.

12.3. Bioaccumulative potential: No data available.

12.4. Mobility in soil: No data available.

12.5. Results of PBT and vPvB assessment: No data available.

12.6. Other adverse effects: No data available.

Section 13 – Disposal Considerations

13.1. Waste treatment methods

Reuse or reprocess if possible. Do not dump into any sewers, on the ground, or into any body of water. Any disposal practice must be in compliance with regulations (contact environmental agency for specific rules). Waste characterisation and compliance with applicable laws are the responsibility of the waste generator.

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Section 14 – Transport Information

- 14.1. UN number: 3264.
- 14.2. UN proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s.
- 14.3. Transport hazard class(es): 8.
- 14.4. Packing group: III.
- 14.5. Environmental hazards: No.
- 14.6. Special precautions for user: As per section 7.

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:

CDG (Carriage of Dangerous Goods) Regulations
 CLP (Chemicals, Labelling and Packaging) Regulations.
 CoSHH (Control of Substances Hazardous to Health) regulations
 Hazardous Waste Regulations
 PPE Regulations
 Workplace Exposure Limits EH40

15.2. Chemical safety assessment: For this product a chemical safety assessment was not carried out.

Section 16 – Other Information

16.1 Other information:
 Written by Paul Talbot.

16.2 Date of the latest revision of the SDS:
 See document header.