Camlab Limited – Material Safety Data Sheet 1110711

1. Identification

Product Code **1110711**

Product Name **SULPHURIC ACID pure**

Molecular Formula H_2SO_4 =98.07

CAS Number **7664-93-9**

Supplier: **CAMLAB LIMITED**

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2. Composition

Component	CAS No	EEC No	Conc w/w	Classification & Risk Phrases	Exp (See 8.1)
Sulphuric acid	7664-93-9	231-639-5	> 98.0%	C : R35	WEL

3. Hazards Identification

Causes severe burns.

4. First Aid Measures

Eyes: Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION URGENTLY.

Skin: Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. OBTAIN MEDICAL ATTENTION URGENTLY.

Inhalation: Remove from exposure. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. If conscious place in a sitting position. OBTAIN MEDICAL ATTENTION URGENTLY.

Ingestion: If conscious give plenty of water to drink. Do not induce vomiting. If unconscious place in the recovery position. OBTAIN MEDICAL ATTENTION URGENTLY.

5. Fire Fighting Measures

Hazards: Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus. May evolve toxic fumes if involved in a fire.

Extinguishing Media: Consider what other flammable materials are present and act accordingly.

Unsuitable Media: Do not allow water to come into direct contact with material.

6. Accidental Release Measures

Personal Protection	Avoid breathing vapour. Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.
Enviromental	Keep material out of sewers, storm drains, surface waters and soil. Keep non-neutralised material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.
Major Spillage	Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.
Minor Spillage	Neutralise spill with soda ash, lime, calcium carbonate or sodium bicarbonate. Wash area down with copious amounts of water.

7. Storage & Handling

Handling Precautions	Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing. When diluting acid always add, acid to water cautiously with agitation. Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.
Storage Conditions	Well ventilated, cool, dry storage .

8.1 Workplace Exposure Limits

Workplace Exposure Limits	Long Term (8hr TWA):	-	ppm	1.000	mg m-3
	Short Term (15min Period):	-	ppm	-	mg m-3

8.2 Personal Protection

Respiratory	Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus.
Hands	Use PVC gauntlets.
Eyes	Use chemical full face shield.
Skin	If skin contact or contamination of clothing is likely, protective clothing must be worn. Wear PVC oversuit.

9. Physical & Chemical Properties

Appearance	Colourless, oily liquid.
Odour	Odourless.
pH	1 @ 20 °C
Boiling point	290.0 °C
Melting point	3.0 °C
Flash point	Not available
Upper Flammable Limit	Not available
Lower Flammable Limit	Not available
Auto Ignition	Not available
Explosive properties	No.
Oxidising Properties	No.
Vapour Presure	1 mm Hg @ 146 C
Relative Density	1.8400 °C
Water Solubility	Completely soluble in water but highly exothermic reaction may cause splattering of acid.

10. Stability & Reactivity

Chemical Stability	Stable under normal conditions
Conditions to Avoid	No specific conditions.
Materials to Avoid	Oxidising and reducing agents. Alkalis. Reacts with most metals to produce extremely flammable hydrogen gas. Peroxides, potassium permanganate, sodium, potassium, platinum, potassium tertiary butoxide. Combustible materials. Reacts with sulphide,phosphide,cyanide, carbide and silicides producing very toxic gases. Many organic compounds.

10. Stability & Reactivity (continued)

Hazardous Decomposition Products	Toxic and acidic dense white fumes.

11. Toxicological Information

Eyes	The liquid and solutions will cause severe burns. Damage can range from severe irritation and corneal scarring to permanent blindness.
Skin	The liquid and solutions will cause severe burns. Severe ulceration and scarring may occur in serious cases. The dilute acid is irritating to the skin.
LD50 Skin	Not available
Ingest	Ingestion will cause severe mouth burns, and if swallowed extensive damage to the oesophagus. Symptoms may include salivation, thirst, difficulty in swallowing, pain, shock and vomiting.
LD50 Ingest	Rat 2140 mg/Kgg
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce severe irritation of the eyes, nose, throat and respiratory tract. High concentrations of vapour will seriously damage the membranes lining the nose, throat and upper respiratory tract.
Carcinogenicity	A positive association has been shown between the development of upper respiratory tract cancer and exposure to high levels of sulphuric acid mist.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	None identified.
Other Information	The irritant effect provides warning that control of exposure is needed. 0.125-0.5 ppm are mildly annoying, 1.2-2.5 ppm definitely unpleasant and 10-20 ppm unbearable.

12. Ecological

Dangerous to aquatic organism: causes damage to crops and vegetables. Natural alkalinity reduces damaged caused by low pH. Aquatic toxicity LC50 Bluegill sunfish. 24 hr fresh water-24.5 mg/l, 48 hr tap-water - 49 mg/l.

13. Disposal Considerations

Disposal Methods	Dispose of in a licensed incinerator. Never dispose of into water courses or sewerage systems.
Contaminated Packaging	Very carefully wash out containers with water. Use a licensed waste disposer.

14. Transport Information

Proper Shipping Name	Sulphuric Acid
UN Number	1830
UN Classification	8 Corrosive
Subsidiary Risk	None
Flash Point	Not available
Packing Group	II
Transport Category	2
Marine pollutant	No
ADR Hazard ID	80

15. Regulatory Information

Labelling Classification	Corrosive.
Label Symbols	C

15. Regulatory Information (continued)

Risk & safety Phrases	Causes severe burns. Keep locked up and out of reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Never add water to this product. In case of accident or if you feel unwell, seek medical advice immediately (show the label).
EEC Number	231-639-5

16. Other Information

Document Information	This document has been prepared in accordance with directive 88/379/EEC. The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. Revision Date: 20/02/06. Data reviewed and PDF file generated: 17/03/10.