


1. Identification

Product Code **1110819**

Product Name **CUPRAMMONIUM HYDROXIDE SOLUTION (Shirley's)**

CAS Number **17500-49-1**

Supplier: **CAMLAB LIMITED**



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Over
Cambridge
England
CB4 5WE**

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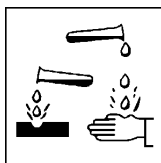
Fax **01954 233101**

Emergency Telephone **08:00-17:00 01954 233110**
24hr 112
(Have this document to hand)

2. Composition

Component	CAS No	EEC No	Conc w/w	Classification & Risk Phrases	Exp (See 8.1)
Ammonia	1336-21-6	231-635-3	20.0%	C : R34,R50	WEL

3. Hazards Identification



Causes burns. Irritating to respiratory system.

4. First Aid Measures

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

Skin Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. In severe cases or if exposure has been great, OBTAIN MEDICAL ATTENTION.

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 Water spray, dry powder, carbon dioxide or vaporising liquids.

Unsuitable Media Nothing specified.

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.

6. Accidental Release Measures (continued)

Environmental	Keep 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	Contain and absorb on inert material. Neutralise with 5M hydrochloric acid. Transfer absorbent to container for removal. 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. Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.
Storage Conditions	Keep product moist, away from direct sources of heat and metals.

8.1 Workplace Exposure Limits

Component	CAS No	Workplace Exposure Limits				Maximum Exposure Limits			
		Long Term		Short Term		Long Term		Short Term	
		ppm	mg m ⁻³	ppm	mg m ⁻³	ppm	mg m ⁻³	ppm	mg m ⁻³
Ammonia	1336-21-6	25.00	17.00	35.00	24.00	-	-	-	-

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 nitrile gloves or PVC gauntlets.
Eyes	Use chemical splash proof glasses or goggles.
Skin	If skin contact or contamination of clothing is likely, protective clothing must be worn.

9. Physical & Chemical Properties

Appearance	Deep blue clear solution.
Odour	Pungent and intensely irritating.
pH	14 @ 20 °C
Boiling point	Not available
Melting point	Not available
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 Pressure	101 kPa @ 20 C
Relative Density	0.9200 °C
Water Solubility	Completely soluble in water.

10. Stability & Reactivity

Chemical Stability	Stable under normal conditions
Conditions to Avoid	No specific conditions.
Materials to Avoid	Acids. Strong oxidising agents.
Hazardous Decomposition Products	May produce hazardous fumes if involved in a fire.

11. Toxicological Information

Eyes	The vapour is be extremely irritating to eyes and can cause chemical eye burns. Damage can range from severe irritation and corneal scarring to permanent blindness.
Skin	The liquid will cause burns.
LD50 Skin	Not available
Ingest	Ingestion will cause severe mouth burns, and if swallowed extensive damage to the oesophagus.
LD50 Ingest	Not available
Inhalation	Exposure to vapour concentrations above the occupational exposure limits will produce irritation of the eyes, nose, throat and respiratory tract. High concentrations of vapour will effect the central nervous system causing spasms. In fatal cases severe damage to the lungs occurs along with secondary cardiovascular effects.
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	No information is available.
Reproductive Effects	No information is available.
Other Information	The irritant effect provides warning that control of exposure is needed. 15ppm is the threshold for irritation with severe irritation occurring above 22ppm.

12. Ecological

Solutions or high vapour concentrations will cause damage to vegetation. If introduced into rivers lakes etc, pH of water is important. If >7.5-8 will form free ammonia which is toxic to aquatic life. Highly mobile and readily diluted in water courses. Copper salts are harmful to the environment.

13. Disposal Considerations

Disposal Methods	Dissolve in water and adjust pH to 7, then precipitate out as the sulphide. Filter off the insoluble material and dispose of at a licensed land-fill site. Destroy excess sulphide with sodium hypochlorite, neutralise the solution and wash to drain with copious amounts of water.
Contaminated Packaging	Wash out containers with water. Use a licensed waste disposer.

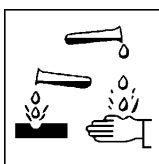
14. Transport Information

Proper Shipping Name	Corrosive Liquid, Basic, Inorganic, N.O.S. (Ammonia Solution)
UN Number	3266
UN Classification	8 Corrosive
Subsidiary Risk	None
Flash Point	Not available
Packing Group	III
Transport Category	3
Marine pollutant	No
ADR Hazard ID	80



15. Regulatory Information

Labelling	Corrosive.
Classification	
Label Symbols	C



15. Regulatory Information (continued)

Risk & safety Phrases	Causes burns. Irritating to respiratory system. Keep locked up and out of reach of children. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label). Avoid release to the environment, refer to special instructions/safety data sheet.
EEC Number	Not available

16. Other Information

Document Information	<p>This document has been prepared in accordance with directive 88/379/EEC.</p> <p>The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment.</p> <p>Revision Date: 12/10/07. Data reviewed and PDF file generated: 17/03/10. Copyright 2010 Camlab Limited.</p>
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