

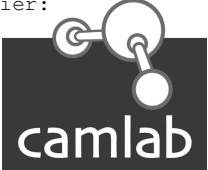
Camlab Limited – Material Safety Data Sheet

1. Identification

Product Code CC/0890-CA

Product Name **BROMINE WATER**

CAS Number **Mixture**

Supplier: **CAMLAB LIMITED**

**Norman Way Industrial Estate
Over
Cambridge
England
CB4 5WE**

Phone **01954 233110**

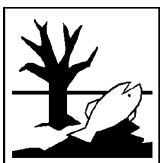
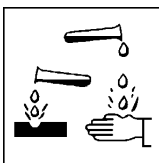
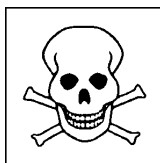
Fax **01954 233101**

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)
Bromine	7726-95-6	231-778-1	< 3.0%	T+ C N : R26,R35,R50	WEL

3. Hazards Identification



Very toxic by inhalation. Causes severe burns. Very toxic to aquatic organisms.

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.

Ingestion Wash out the patients mouth thoroughly with water. OBTAIN MEDICAL ATTENTION URGENTLY.

5. Fire Fighting Measures

Hazards Presents no specific fire danger.

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

Unsuitable Media Nothing specified.

6. Accidental Release Measures

Personal Protection Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.

Environmental 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.

6. Accidental Release Measures (continued)

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.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

Storage Conditions Well ventilated, cool, dry storage .

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
Bromine	7726-95-6	0.1000	0.6600	0.3000	2.000	-	-	-	-

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 Clear orange solution.

Odour Odourless.

pH 1 @ 20 °C

Boiling point Aqueous solution

Melting point 999.0 °CAqueous solution

Flash point Aqueous solution

Upper Flammable Limit Not available

Lower Flammable Limit Not available

Auto Ignition Not available

Explosive properties No.

Oxidising Properties No.

Vapour Pressure Not available

Relative Density 1.0200 °C

Water Solubility Completely miscible in water.

10. Stability & Reactivity

Chemical Stability Stable under normal conditions

Conditions to Avoid No specific conditions.

Materials to Avoid Strong oxidising agents.

Hazardous Decomposition Products May decompose to emit toxic and irritant fumes of hydrogen bromide.

11. Toxicological Information

Eyes The liquid is irritating to the eyes but unlikely to cause serious injury.

Skin The liquid will be an irritant on brief or occasional exposure. May cause burns on prolonged contact.

LD50 Skin Not available

11. Toxicological Information (continued)

Ingest	Ingestion of large amounts may produce 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	Not available
Inhalation	Presents no significant health hazard by inhalation.
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	None identified.
Other Information	5-10ppm is the threshold for irritation with severe irritation occurring at 50-100 ppm.

12. Ecological

Neutralised material presents no specific environmental hazard.

13. Disposal Considerations

Disposal Methods	Dilute in a large excess of water and carefully neutralise with soda ash, then wash to drain with copious amounts of water.
Contaminated Packaging	Carefully neutralise with a weak sodium hydroxide solution then wash out thoroughly with water. Use a licensed waste disposer.

14. Transport Information

Proper Shipping Name	Bromine
UN Number	1744
UN Classification	8 Corrosive
Subsidiary Risk	6.1 Toxic
Flash Point	Not available
Packing Group	I
Transport Category	1
Marine pollutant	No
ADR Hazard ID	886

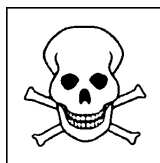


15. Regulatory Information

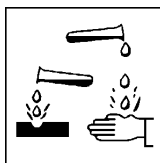
Labelling	Very Toxic, Corrosive, Dangerous for the Environment.
Classification	

Label Symbols

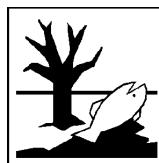
T+



C



N



Risk & safety Phrases	Very toxic by inhalation. Causes severe burns. Very toxic to aquatic organisms. Keep locked up and out of reach of children. Keep container tightly closed and in a well ventilated place. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. 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.
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EEC Number	Not available
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16. Other Information

Document Information	This document has been prepared in accordance with directive 88/379/EEC.
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16. Other Information (continued)

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment.

Revision Date: 19/11/03.

Data reviewed and PDF file generated: 19/07/07.

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