

## 1. Identification

Product Code                    **CB4954-12**

Product Name                   **BROMINE pure  
(packed in safety coated glass)**

Molecular Formula           **Br =79.90**

CAS Number                    **7726-95-6**

Supplier:  **BEECROFT & PARTNERS**  
                                          Northfield Road  
                                          Rotherham  
                                          South Yorkshire

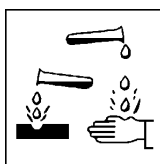
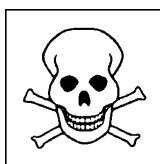
Phone                              01709-377881  
 Fax                                 01709-369264

Emergency Telephone        08:30-1700                    01709-377881  
                                          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 | > 99.0%  | T+ C N : R26,R35,R50          | OES           |

## 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 until MEDICAL ATTENTION has been obtained.

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. OBTAIN MEDICAL ATTENTION URGENTLY.

Ingestion                         Wash out the patients mouth thoroughly with water. 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. Use water spray to keep fire exposed containers cool.

Unsuitable Media               Do not use water jet.

## 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. Beware : vapour is heavier than air and will tend to accumulate at low spots. |
| Enviromental        | 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. Neutralise with lime water or sodium thiosulphate. 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 lime water or sodium thiosulphate. 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.<br><br>Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits. |
| Storage Conditions   | Well ventilated, cool, dry storage .                                                                                                                                                                 |

## 8.1 Occupational Exposure Limits

|                                |                            |            |               |
|--------------------------------|----------------------------|------------|---------------|
| Occupational Exposure Standard | Long Term (8hr TWA):       | 0.1000 ppm | 0.7000 mg m-3 |
|                                | Short Term (15min Period): | 0.3000 ppm | 2 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 organic vapour respirator, or use self contained breathing apparatus. |
| Hands       | Use solvent resistant gloves.                                                                                                                                                                                     |
| Eyes        | Use chemical splash proof glasses or goggles.                                                                                                                                                                     |
| Skin        | Wear PVC oversuit.                                                                                                                                                                                                |

## 9. Physical & Chemical Properties

|                       |                                   |
|-----------------------|-----------------------------------|
| Appearance            | Red-brown liquid.                 |
| Odour                 | Pungent and intensely irritating. |
| pH                    | Not available                     |
| Boiling point         | 58.8 °C                           |
| Melting point         | -7.3 °C                           |
| Flash point           | Not available                     |
| Upper Flammable Limit | Not available                     |
| Lower Flammable Limit | Not available                     |
| Auto Ignition         | Not available                     |
| Explosive properties  | No.                               |
| Oxidising Properties  | A strong oxidising agent.         |
| Vapour Presure        | 175 mmHg @20C                     |
| Relative Density      | 3.1200                            |
| Water Solubility      | 3.5%                              |

## 10. Stability & Reactivity

|                     |                                                                                                                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemical Stability  | Stable under normal conditions                                                                                                                                                                                                                            |
| Conditions to Avoid | Do not allow to impregnate wood or other organic materials.                                                                                                                                                                                               |
| Materials to Avoid  | Reacts vigorously with phenols, amines, hydrocarbons, organic acids and ketones. Dry bromine reacts violently with many metals, notably aluminium, titanium, mercury, potassium and with phosphorous. A strong oxidiser notably in the presence of water. |

## 10. Stability & Reactivity (continued)

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

## 11. Toxicological Information

Eyes Both the vapour and liquid will, be extremely irritating to eyes and can cause chemical eye burns. Lachrymation occurs at a vapour concentration of less than 1 ppm.

Skin The liquid and solutions will cause severe burns. May be absorbed through the skin.

LD50 Skin Not available

Ingest Ingestion will cause severe internal irritation and damage, nausea, vomiting, abdominal pains and diarrhoea.

LD50 Ingest Human LD<sub>50</sub> 14mg/Kg

Inhalation Exposure to vapour concentrations above the occupational exposure limits will produce severe irritation of the eyes, nose, throat and respiratory tract. A vapour concentration of 10ppm will cause respiratory damage.

Carcinogenicity Not considered to be a carcinogen.

Mutagenicity Not considered to be a mutagen.

Reproductive Effects No information is available.

Other Information 0.3ppm causes irritation to the eyes. 0.5-1.0ppm can be quickly detected by smell. 10ppm is intolerable and causes acute distress and pain in the upper respiratory tract. NO irritant effect is present at harmful concentrations of the vapour.

## 12. Ecological

Very toxic to aquatic organisms.

## 13. Disposal Considerations

Disposal Methods Never dispose of into water courses or sewerage systems. Neutralise with lime water or sodium hydroxide prior to disposal.

Contaminated Packaging Wash out containers with water.

## 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  
Marine pollutant No  
ADR Hazard ID 886

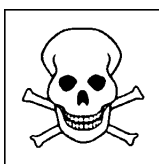


## 15. Regulatory Information

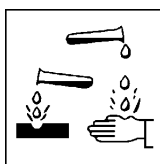
Labelling Very Toxic, Corrosive, Dangerous for the Environment.  
Classification

Label Symbols

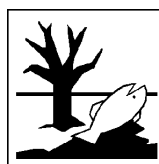
T+



C



N



## 15. Regulatory Information (continued)

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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. |
| EEC Number            | 231-778-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## 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: 23/06/03.<br/>Data reviewed and PDF file generated: 07/06/04.<br/>Copyright 2004 Beecroft &amp; Partners.</p> |
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