



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. BB 42  
Effective Date October 6, 1998

## SECTION V HEALTH HAZARD DATA

BB 42

**Threshold Limited Value** 0.5 mg/m<sup>3</sup> as Barium (ACGIH, 1992-93). U.S. H.E.W. Toxic Substance List (1976) gives; orl-hmu TDLo: 80 mg/Kg.; orl-rat LDLo: 335 mg/Kg.

**Effects of Overexposure** **MAY BE HARMFUL OR FATAL IF SWALLOWED.** Oral intake may cause weakness, salivation and nausea, followed by vomiting and diarrhea. Patient may become cold and experience varying degrees of paralysis. **INHALATION:** May be harmful, with symptoms similar to those of oral intake. Observe allowable limits. **EYES AND SKIN CONTACT:** Not usually severe, but may cause irritation to sensitive individuals.

**Emergency and First Aid Procedures** **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink and induce vomiting. Repeat until vomit fluid is clear. Call physician immediately. Never give anything by mouth to an unconscious person. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention. **SKIN:** Flush with water, then wash with mild soap and water. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

## SECTION VI REACTIVITY DATA

|                  |                 |   |                            |                                 |
|------------------|-----------------|---|----------------------------|---------------------------------|
| <b>Stability</b> | <b>Unstable</b> |   | <b>Conditions to Avoid</b> | Excessive temperature and heat. |
|                  | <b>Stable</b>   | X |                            |                                 |

**Incompatibility (Materials to Avoid)** Bromine Trifluoride and 2-Furan percarboxylic acid, violent reaction.

|   |   |
|---|---|
| <b>Hazardous Decomposition Products</b> | Thermal decomposition or burning may produce hydrochloric acid, barium oxide and toxic fumes of chlorine gas. |
|---|---|

|                                 |                            |
|---------------------------------|----------------------------|
| <b>Hazardous Polymerization</b> | <b>Conditions to Avoid</b> |
| <b>May Occur</b>                | <b>Will Not Occur</b>      |
|                                 | X                          |
| Not applicable.                 |                            |

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** In case of spill, treat the spill with dilute sulfuric acid solution to precipitate the barium to barium sulfate. Neutralize the excess acid using sodium bicarbonate. Flush residue to sewer with copious amounts of water.

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.

Dispose of by treating barium chloride solution with dilute sulfuric acid solution to precipitate the barium to barium sulfate. Neutralize the excess acid using sodium bicarbonate. Flush residue to sewer with copious amounts of water. Barium chloride solution may also be disposed of by contracting with a licensed waste disposal service.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** None needed in normal laboratory handling. If misty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved respirator.

|                    |                             |                |                |     |
|--------------------|-----------------------------|----------------|----------------|-----|
| <b>Ventilation</b> | <b>Local Exhaust</b>        | None required. | <b>Special</b> | No. |
|                    | <b>Mechanical (General)</b> | None required. | <b>Other</b>   | No. |

|                          |         |                       |                          |
|--------------------------|---------|-----------------------|--------------------------|
| <b>Protective Gloves</b> | Rubber. | <b>Eye Protection</b> | Chemical safety glasses. |
|--------------------------|---------|-----------------------|--------------------------|

|                                   |   |
|-----------------------------------|---|
| <b>Other Protective Equipment</b> | Goggles, smock, apron, proper gloves, eye wash station. |
|-----------------------------------|---|

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Store in a cool place, away from food products. Wash thoroughly after handling.  
Keep container tightly closed when not in use.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals.

Avoid contact with skin, eyes and clothing. Avoid breathing mist. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

|                       |                     |                                 |                                       |
|-----------------------|---------------------|---------------------------------|---------------------------------------|
| <b>Revision</b> No. 2 | <b>Date</b> 10/6/98 | <b>Approved</b> Michael Raszeja | <b>Chemical Safety Coordinator</b> MR |
|-----------------------|---------------------|---------------------------------|---------------------------------------|

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## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

|                          |                                 |
|--------------------------|---------------------------------|
| <b>Product</b>           | Barium Chloride, (0.5N/0.25M)   |
| <b>Chemical Synonyms</b> | Barium Chloride, Water Solution |
| <b>Formula</b>           | Mixture.                        |
| <b>Unit Size</b>         | up to 4 Lt.                     |
| <b>C.A.S. No.</b>        | Mixture.                        |

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|            |   |
|------------|---|
| Health     | 2 |
| Fire       | 0 |
| Reactivity | 0 |

NFPA HAZARD RATING

|       |        |          |      |         |
|-------|--------|----------|------|---------|
| LEAST | SLIGHT | MODERATE | HIGH | EXTREME |
| 0     | 1      | 2        | 3    | 4       |

HMIS \*

## SECTION II INGREDIENTS OF MIXTURES

| Principal Component(s)                                | %     | TLV Units         |
|---|-------|-------------------|
| Barium Chloride: (CAS No. 10361-37-2)                 | 5.2%  | See Section V.    |
| Water: (CAS No. 7732-18-5)                            | 94.8% | None established. |
| <b>WARNING! MAY BE HARMFUL OR FATAL IF SWALLOWED.</b> |       |                   |

CONTACT CAUSES SKIN AND EYE IRRITATION.

## SECTION III PHYSICAL DATA

|                        |                                   |   |                       |
|------------------------|-----------------------------------|---|-----------------------|
| Melting Point (°F)     | Freezes approx. 0°C (32°F)        | Specific Gravity (H <sub>2</sub> O = 1) | 1.01                  |
| Boiling Point (°F)     | 100°C (212°F) water.              | Percent Volatile by Volume (%)          | 94.8%                 |
| Vapor Pressure (mm Hg) | 14 mm (water).                    | Evaporation Rate (Water = 1)            | Slightly less than 1. |
| Vapor Density (Air=1)  | 0.7 (water).                      |   |                       |
| Solubility in Water    | Complete.                         |   |                       |
| Appearance & Odor      | Clear, colorless liquid; no odor. |   |                       |

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

|                                  |   |  |     |              |              |
|----------------------------------|---|--|-----|--------------|--------------|
| <b>Flash Point (Method Used)</b> | Non-flammable.  | <b>Flammable Limits in Air % by Volume</b> | N/A | <b>Lower</b> | <b>Upper</b> |
| <b>Extinguisher Media</b>        | Use any media suitable for extinguishing supporting fire. |  |     |              |              |

### SPECIAL FIREFIGHTING PROCEDURES

A NIOSH/MSHA-approved self-contained breathing apparatus should be worn for protection against barium-containing dust, mist or fumes.

### UNUSUAL FIRE AND EXPLOSION HAZARDS

In fire conditions, water may evaporate from this solution, which may cause hazardous decomposition products to be produced as dust or fume.

D.O.T. Non-regulated.

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20