

MATERIAL SAFETY DATA SHEET™

Sostram Corporation
300 Colonial Center Parkway, Suite 230
Roswell, GA 30076

In Case of Emergency, Call
Sostram Corporation: 770-587-9807
CHEMTREC: 800-424-9300

I. GENERAL INFORMATION

1-Slight Health Hazard

0-Not Flammable

0-Nonreactive

Above: Ratings based on NIOSH "Identification System for Occupationally Hazardous Materials" (1974).

II. TRANSPORTATION INFORMATION

This product is not regulated for transportation purposes according to DOT Hazard Classification

III. PRODUCT IDENTIFICATION

Product Name: BOR-RAM

Synonyms: Glycol/disodium octaborate tetrahydrate solution

IV. HAZARDOUS INGREDIENTS

The substances listed below are those identified as hazardous chemicals under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200).

| <u>Component</u> | <u>CAS No.</u> | <u>Exposure Limits</u> |
|----------------------------------|----------------|--|
| Disodium octaborate tetrahydrate | 12280-03-4 | 15mg/m ³ * (total dust) 5mg/m ³ * (respirable dust) |
| Ethylene glycol | 107-21-1 | 50mg/m ³ ** |

* OSHA/PEL

** ACGIH/TLV

V. PHYSICAL DATA

| | |
|-----------------------------|---------------------------------------|
| Melting Point: | NA |
| Specific Gravity (Water=1): | 1.36 |
| Vapor Pressure at 20 °C: | ND |
| Appearance and Odor: | Clear colorless liquid with mild odor |
| Solubility in Water | 100% |
| pH | 6.0 – 7.5 |
| Evaporation Rate | ND |

VI. FIRE AND EXPLOSION DATA

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|-------------------------------------|---|
| Flash Point: | >212°F |
| Flammability Limits in Air: | N/A |
| Extinguishing Media: | CO ₂ , foam, dry chemical, water |
| Special Fire Fighting Procedures: | Wear self-contained breathing apparatus and protective clothing. Fight fire upwind. Dike area to prevent water runoff. Vapors and fumes from fire may be hazardous. Evacuate people downwind from fire. |
| Unusual Fire and Explosion Hazards: | Solvent vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited by flames and ignition sources. Runoff to sewer may create fire or explosion hazard. |

VII. HEALTH HAZARD INFORMATION (* denotes data for disodium octaborate tetrahydrate)

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|--|---|
| Oral LD ₅₀ (rat): | *2,550 mg/kg |
| Dermal LD ₅₀ (rabbit): | *>2,000 mg/kg |
| Inhalation LC ₅₀ (4-hour; rat): | *> 2.0 mg/Liter of air |
| Primary Eye Irritation (rabbit): | Mild irritant (may cause burning, tearing and redness in sensitive individuals) |
| Primary Dermal Irritation Index (rabbit): | Essentially non-irritating |

Emergency and First Aid Procedures

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|-------------|---|
| Eyes: | Flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. Get medical attention immediately. |
| Skin: | Wash affected skin areas with soap and large amounts of water until no evidence of chemical remains (approximately 15 minutes). If irritation or redness develops, get medical attention. Wash clothing before reuse |
| Inhalation: | Remove subject to fresh air. If breathing is difficult, oxygen should be administered by qualified personnel. If breathing has stopped, perform artificial respiration. Get medical attention. |
| Ingestion: | Immediately drink two glasses of milk or gelatin mixture, or if these are not available, a large quantity of water. Avoid alcohol. Do not give anything by mouth if the person is unconscious or having convulsions. Get medical attention immediately. |

Chronic Effects of Overexposure

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|-------|--|
| Eyes: | Repeated or prolonged contact to high vapor concentrations may cause a burning sensation, conjunctivitis, and blurred vision. |
| Skin: | Prolonged or repeated contact may result in softening of the skin, pre-existing skin conditions may be aggravated by prolonged or repeated contact |

VIII. REACTIVITY DATA

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| <u>Conditions Contributing to Instability:</u> | Stable under normal temperatures and pressures. Avoid excessive heat. |
| <u>Incompatibility:</u> | Avoid contact with strong oxidizing agents. |
| <u>Hazardous Decomposition Products:</u> | Thermal decomposition products include, but are not limited to, aldehydes, alcohols, ethers and organic acids. |
| <u>Hazardous Polymerization:</u> | Material not known to polymerize under normal temperatures and pressure. |

IX. SPILL OR LEAK PROCEDURES

Steps To Be Taken If Material Is Released Or Spilled:

Ventilate area of spill or leak. Prevent entry into waterways, sewer, basements or confined areas. Keep unnecessary persons away from spill. Contain and recover spilled material where possible or absorb with an inert material (vermiculite, sand or dirt). Use clean, non-sparking tools and equipment. Place contaminated materials in closed, labeled containers and store in a safe place to await proper disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Persons performing this work should wear adequate personal protective equipment and clothing. Please refer to ERG #171 for more information.

Waste Disposal:

Contact State or Local Authorities for proper disposal guidelines

X. INDUSTRIAL HYGIENE CONTROL MEASURES

Ventilation Requirements

Good industrial hygiene practice dictates that indoor work areas be isolated and provided with adequate local exhaust ventilation. Work upwind in out-of-doors batch operations.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

EYE: Splash-proof goggles or face shields. Do not get this material in your eyes.

SKIN: Wear protective chemical-resistant gloves and impervious clothing to minimize skin-contact.

RESPIRATORY/VENTILATION: Wear respiratory protective equipment if exposure to levels above the occupational exposure limit of the most volatile component is likely. Use chemical cartridge respirator with organic vapor cartridge and particulate filter.