



Material Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name: BromMax® 7.1

US Patent: No. 7,045,153 B2 / No. 7,455,859 B2 / No. 7,309,503 B2

Description: Water treatment antimicrobial solution.

Manufacturer: ENVIRO TECH CHEMICALS, Inc.
500 Winmoore Way
Modesto, CA 95358

Company's Informational Telephone: 209-581-9576

Company's Transportation Emergency: CHEMTREC US Toll Free 800-424-9300 / International 703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

NFPA 704M / HMIS Rating: 2/2 Health 0/0 Flammability 1/1 Reactivity COR/Other

Emergency Overview:

WARNING: Causes irritation to skin and eyes. Do not get in eyes, on skin, or on clothing. Do not take internally. Keep container closed when not in use. Keep container away from heat and sunlight.

Potential Health Effects:

Primary Route(s) of Exposure: Eye, Skin

Eye Contact: Can cause acute burns and irritation.

Skin Contact: Can cause irritation of various degrees.

Ingestion: Severe intestinal tract irritant. Do not induce vomiting.

Inhalation: May cause irritation to the respiratory tract and lungs.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s). Hazardous components are marked with an asterisk* as listed under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 15 for the nature/limits of the hazard.

<u>Ingredients</u>	<u>CAS #</u>	<u>Approx. %</u>
*Sodium hydroxide	1310-73-2	1-5%
Sodium sulfamate	13845-18-6	1-6%
Sodium bromosulfamate	134509-56-1	20-25% Combined
Sodium chlorosulfamate	17172-27-9	

(Note: There is no free sodium bromide or sodium hypochlorite in the finished product)

SECTION 4: FIRST AID MEASURES

Eyes: Flush with water for 15 minutes holding eyelids open. Call a physician.

Skin: Immediately flush with water for at least 15 minutes. For a large splash, flood body under a shower. Call a physician.

Ingestion: Do not induce vomiting. Do not give water. Call a physician.

Inhalation: Remove to fresh air. Treat symptoms. Call a physician.

Note to Physicians: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.



SECTION 5: FIRE FIGHTING MEASURES

Flash Point: None (PMCC) ASTM D-93

Extinguishing Media: Water spray, carbon dioxide, foam, dry chemical

Unusual fire and Explosion Hazard: Material is a strong oxidizer. May combine with various metals (at decomposition) to form further flammable mixtures.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Liquid Spill: Contain with absorbent material such as clay or inert absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal.

Large liquid Spill: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. This product can be neutralized of its halogen (active ingredient) components by sprinkling sodium metabisulfite or sodium sulfite on the spilled material.

For large indoor spills, evacuate employees and ventilate area. Those responsible for control and recovery should wear the protective equipment specified in Section 8.

SECTION 7: HANDLING AND STORAGE

Storage: Keep container closed when not in use.

Handling: Avoid contact with skin, eyes, and clothing

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits of hazardous ingredient:

<u>Ingredient</u>	<u>ACGIH-TLV</u>	<u>OSHA-PEL</u>	<u>NIOSH-REL</u>
Sodium Hydroxide	2mg/m ³ (ceiling)	2mg/m ³ (ceiling)	2mg/m ³ (ceiling)

Respiratory Protections: If it is possible to generate hazardous decomposition products, or vapors, or mists, a NIOSH approved or equivalent respirator is recommended.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilations, a positive pressure, self contained breathing apparatus is recommended.

Ventilation: General ventilation is recommended. Local ventilation is recommended where misting can occur.

Protective Equipment: Use impermeable gloves, boots, apron, and a face shield with chemical splash goggles. Suitable impermeable gloves include neoprene, nitrile, PVC, natural rubber, viton and butyl. A full slicker suit is recommended if gross exposure is possible.

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove and thoroughly wash the affected area. Launder contaminated clothing before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Form:	Liquid	
Color:	Golden colored liquid	
Water Solubility:	Complete	
Density:	10.8-11.3 lbs./gal. @ 68° F	
Specific Gravity:	1.30-1.37 @ 68° F	ASTM D-1298
Viscosity:	N/A	ASTM D-2983
pH (neat):	>13	ASTM E-70
Freeze Point:	<32 deg F	ASTM D-1177
Flash Point:	none (PMCC)	ASTM D-93



VOC Content % none EPA Method 24

Note: These physical properties are typical values for this product but are not absolute

SECTION 10: STABILITY AND REACTIVITY

Avoid contact with strong acids, (i.e. Sulfuric, phosphoric, nitric, hydrochloric, chromic, sulfamic) which can generate heat, splattering or boiling and the release of toxic fumes. Avoid contact with copper and iron.

Avoid contact with strong oxidizers (i.e. peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions, and the release of toxic fumes.

Thermal Decomposition Products: In the event of combustion, nitrogen, bromine, hydrobromic acid vapors or gases may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 11: TOXICOLOGICAL INFORMATION

Toxicity Studies: Toxicity studies have been completed on this product. The results are shown below:

Acute Oral Toxicity (Albino Rats):	> 5,000 mg/kg
Acute Dermal Toxicity (Albino Rats):	> 2,000 mg/kg
Acute Inhalation Toxicity (Rats) (LC ₅₀):	> 2.13 mg/L
Primary Skin Irritation Test (Albino Rabbits):	Irritant
Primary Eye Irritation Test (Albino Rabbits):	Acute irritant

SECTION 12: ECOLOGICAL CONSIDERATION

Results below are based on the active product (reported as Cl₂).

Avian Exposure:

Upland Game Birds:	
Acute oral LD ₅₀	> 2,510 mg/kg
Subacute Dietary LC ₅₀	> 5,000 mg/kg

Aquatic Data:

Cold Water Fish, acute toxicity, LC ₅₀	1.35 ppm (max) (96 hr)
Warm Water Fish, acute toxicity, LC ₅₀	2.1 ppm (max) (96 hr)
Invertebrate (D. magna), acute toxicity, LC ₅₀	2.3 ppm (max) (48 hr)

SECTION 13: DISPOSAL CONSIDERATION

Disposal: If this product becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource and Recovery Act (RCRA) 40 CFR 261. It does not have the characteristics of Subpart C, nor is it listed under Subpart D.

If neutralized in accordance with Section 6, this product becomes a non-hazardous liquid waste. It should be solidified with stabilizing agents (such as sand, clay or fly ash) so that no free liquid remains before disposal to a licensed industrial waste landfill. A non-hazardous liquid waste can also be deep well injected in accordance with local, state, and federal regulations.

SECTION 14: TRANSPORT INFORMATION

Proper shipping name/hazard class may vary by packaging, properties, and mode of transportation. Typical proper shipping names for this product are: (Note: sodium hydroxide may be used in addition to or in place of bromide salts if desired)

Road Transportation Modes:	Corrosive liquid, n.o.s. (bromide salts), UN 1760
Air Transportation:	Corrosive liquid, n.o.s. (bromide salts), UN 1760
Marine Transportation:	Corrosive liquid, n.o.s. (bromide salts), UN 1760



Hazard Class, Primary:	8 – Corrosive
Packaging Group:	III
IMDG Page No:	ND
IATA Packing Instruction:	808
IATA Cargo Aircraft Limit:	1.0 L
Flash Point:	None
Technical Name:	N/A
RQ LBS (Per Package):	N/A
RQ Components:	N/A

SECTION 15: REGULATORY INFORMATION

The following regulations apply to this product.

Federal Regulations:

OSHA's Hazard Communication Rule, 29 CFR 1910.1200: Based on our evaluation there are no applicable hazardous components.

CERCLA/SUPERFUND, 40 CFR 117, 301: **N/A**

SARA/SUPERFUND AMENDMENTS ACT OF 1986 (TITLE III) – SECTIONS 302,311,312,AND 313:

Section 302 – Extremely hazardous substances (40 CFR 355): This product does not contain ingredients listed in Appendix A and B as an extremely hazardous substance.

Sections 311 and 312 – Material Safety Data Sheet Requirements (40 CFR 370): Our hazard evaluation has found this product to be mildly hazardous due to skin and eye corrosivity. The product should be reported under the following EPA hazard categories:

Yes	Immediate (acute) health hazard
no	Delayed (chronic) health hazard
no	Fire hazard

Section 313 - List of Toxic Chemicals (40CFR 372): This product does not contain ingredients on the list of Toxic Chemicals.

Toxic Substance Control act (TSCA): The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

Food and Drug Administration: Federal Food, Drug, and Cosmetic Act: **N/A**

Resource Conservation and Recovery Act (RCRA), 40CFR 261 Subpart C and D: Consult Section 13 for RCRA classification.

Federal Water Pollution Control Act, Clean Water Act, 40 CFR 401.15: **N/A**

State Regulations:

California Proposition 65: None of the chemicals on the current Proposition 65 list are known to be present in this product.

Michigan Critical Materials: This product does not contain substance (s) identified on this list.

State Right to Know Laws: **N/A**

SECTION 16: OTHER INFORMATION

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information.

N/A = Not Applicable

ND = None Detected

Updated: October 13, 2014, Nakeeta Sawyers

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