



Material Safety Data Sheet

SECTION 1: IDENTIFICATION OF THE PRODUCT AND THE COMPANY

Product Name: Enviro-Brom 20L

Description: Water-based antimicrobial solution.

Manufacturer: ENVIRO TECH Chemical Serv., 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: 1/2 Health 0/0 Flammability 0/0 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. May cause pain disproportionate to the level of irritation to the eye.

Skin Contact: Can cause irritation of various degrees. Prolonged contact may cause severe skin irritation with discomfort.

Ingestion: Severe intestinal tract irritant. Do not induce vomiting. Low to moderate toxicity if swallowed in small quantities.

Inhalation: May cause irritation or discomfort to the respiratory tract (nose and throat) and lungs.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Our evaluation has identified the following chemical ingredient (s). Consult [Section 8](#) for the nature of the hazard.

<u>Ingredients</u>	<u>CAS #</u>	<u>Approx. %</u>
2,2-Dibromo-3-nitropropionamide	10222-01-2	18-20%
Sodium bromide	1310-73-2	11-15%
Water		Balance

SECTION 4: FIRST AID MEASURES

Eyes: Flush with water for 15 minutes holding eyelids open. Remove contact lenses, if present, after the first 5 minutes. Call a physician.

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

Ingestion: Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a doctor. Give water if able to drink.

Inhalation: Remove to fresh air. Treat symptoms. Call a physician or poison control center for advice.

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

Flammable/Explosion Limits: N/A

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

Unusual fire and Explosion Hazard: May combine with various metals (at decomposition) to form further mixtures of Br₂, HBr and NO_x.

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 a 10% solution of soda ash or sodium bicarbonate 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. Store below 100°F.

Handling: Avoid contact with skin, eyes, and clothing. Avoid vapors from headspace of containers when opening.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: These values are not promulgated, but are Enviro Tech's recommended levels.

<u>Ingredient</u>	<u>ACGIH-TLV</u>	<u>OSHA-PEL</u>	<u>NIOSH-REL</u>
2,2-Dibromo-3-nitropropionamide	2mg/m ³ (ceiling)	2mg/m ³ (ceiling)	2mg/m ³ (ceiling)
Sodium bromide	N/A	N/A	N/A
(sodium bromide is a non-hazardous component of the formulation)			

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:	Cream to yellow opaque dispersion	
Water Solubility:	~10% as-is product	
Density:	11.3-11.6 lbs./gal. @ 68° F	
Specific Gravity:	1.35-1.39 @ 68° F	ASTM D-1298
Viscosity:	300-500 cts @ 68° F	ASTM D-2983
pH (neat):	3-4.5	ASTM E-70



Freeze Point:	<32 deg F	ASTM D-1177
Flash Point:	none (PMCC)	ASTM D-93

Note: These physical properties (Section 9) are typical values for this product but are not absolute

SECTION 10: STABILITY AND REACTIVITY

Avoid contact with strong alkali or oxidizing materials, (i.e. sodium hydroxide) which can generate heat, splattering or boiling and the release of toxic fumes. Avoid contact with soft metals.

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 the active ingredients. The results are shown below:

Acute Oral Toxicity LD ₅₀ (Albino Rats):	308 mg/kg
Acute Dermal Toxicity LD ₅₀ (Albino Rats):	>2,000 mg/kg
Acute Inhalation Toxicity LC ₅₀ (Rabbit):	0.32 mg/l (4 hrs)
Primary Skin Irritation Test (Albino Rabbits):	>2,000mg/kg
Primary Eye Irritation Test (Albino Rabbits):	No data (corrosive product)
NOEL:	5 mg/kg/day (13 weeks oral, rat)

SECTION 12: ECOLOGICAL INFORMATION

Results below are based on the active product.

Avian Data:

Acute oral LD ₅₀ , quail	354 mg/kg
Subacute Dietary LC ₅₀ (quail and duck)	>5,620 ppm

Aquatic Data:

96 Hour LC ₅₀ , fish, mg/l	2.3 Rainbow trout, 3.4 Sheepshead minnow, 2.3 Bluegill, 0.72 Mysid shrimp, 0.37 eastern oyster
Invertebrate (D. magna), acute toxicity, EC ₅₀	0.86 mg/l (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.

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:

Road Transportation Modes:	Non regulated
Air Transportation:	Non regulated



Marine Transportation:	Bulk only: Environmentally hazardous substance, n.o.s. (2,2,dibromo-3-nitropropionamide, 9, UN3082, PGIII
Packaging Group:	III
IMDG Page No:	ND
IATA Packing Instruction:	Same as bulk marine transport (above)
IATA Cargo Aircraft Limit:	1.0 L
Flash Point:	None
Technical Name:	DBNPA
RQ LBS (Per Package):	N/A
RQ Components:	N/A

SECTION 15: REGULATORY INFORMATION

The following regulations apply to this product.

USA: This product is subject to registration under FIFRA. This product is listed in EPA's TSCA Inventory as (Acetamide, 2,2-dibromo-2-cyano-).

Yes Immediate (acute) health hazard

Yes Delayed (chronic) health hazard

No Fire hazard

Canada: Listed in NDSL

Japan: Listed in METI

Australia: Listed in AICS

Korea: Listed in ECL

Germany: Water endangering classes, (WGK): Class 3

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: Listed: 21 CFR 176.300 (slimicides for paper)

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.

New Jersey: N/A

Pennsylvania: N/A

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

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