1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade Name: MC B-8510
Chemical description/Application: Biocide
Supplier: Multi-Chem Production Chemicals®
5301 Knickerbocker Road Suite #200
San Angelo, TX 76904
1 325 223 6200
Emergency Telephone:
1 800 535 5053
613.996.6666 (Outside United States)

2. HAZARDS IDENTIFICATION

This product is a colorless to yellow liquid that is odorless or may have a mild odor.
DANGER! Keep out of reach of children. Corrosive. Causes severe eye burns. Harmful if swallowed. Causes skin irritation. Highly toxic to fish and/or other aquatic organisms. Toxic fumes may be released in fire situations.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>EINECS No</th>
<th>CAS No</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene glycol</td>
<td></td>
<td>25322-68-3</td>
<td>40-60%</td>
</tr>
<tr>
<td>2,2-Dibromo-3-nitrilopropionamide</td>
<td></td>
<td>10222-01-2</td>
<td>10-30%</td>
</tr>
<tr>
<td>Dibromoacetonitrile</td>
<td></td>
<td>3252-43-5</td>
<td>1-10%</td>
</tr>
<tr>
<td>Sodium bromide</td>
<td></td>
<td>7647-15-6</td>
<td>1-10%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation
If exposure by inhalation is suspected, immediately move exposed individual to fresh air. Oxygen may be administered if breathing is difficult. If individual experiences nausea, headache, dizziness, has difficulty in breathing seek a health care professional immediately.

Skin Contact
Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

Eye Contact
Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

Ingestion
Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

5. FIRE-FIGHTING MEASURES

Extinguishing Media
Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function.

Special Fire Fighting Procedures
Firefighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
Products of Combustion
Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen bromide. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards
N/A

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Wear protective PPE as described in Section 8; remove sources of ignition; avoid contact with skin and eyes.

Environmental Precautions
Do not discharge into drains, water courses or onto the ground.

Spill Clean-Up Procedure
Contain spilled material if possible. Attempt to neutralize by adding materials such as Sodium bisulphite. Sodium metabisulphite. Neutralize with approximately 17.2 grams sodium bisulphite (NaHSO3) or 15.7g sodium meta bisulphite (Na2S2O5) for every 100 grams biocidal product. Absorb with materials such as: Dirt. Sand. Vermiculite. Zorb-all®. Hazorb®. Collect in suitable and properly labeled containers.

7. HANDLING AND STORAGE

Usage Precautions
Avoid contact with skin and eyes. Prevent accidental ingestion or inhalation.

Storage Precautions
Store in tightly closed original container in cool temperatures and well ventilated areas. Keep away from heat, sparks and flame. Keep away from incompatibles. Ground container equipment and personnel before handling product. Do not store in aluminum. Use within 12 months. Storage temperature below 35C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards
Sodium bromide
DOW IHG TWA 10 mg/m3
Polyethylene glycol
WEEL TWA Particulate 10 mg/m3
2,2-Dibromo-1-nitrilopropionamide
DOW IHG Ceiling 2 mg/m3
Dibromacetanitrile
DOW IHG Ceiling 0.1ppm Skin

Engineering Measures
Use local exhaust to control mists or vapors. Additional ventilation or exhaust may be required to maintain air concentrations below recommended exposure limits. Use explosion proof equipment.

Respiratory Equipment
Type approved RPE for organic vapors and mists if required.

Hand Protection

Eye Protection
Wear goggles/face shield.

Other Protection
Wear suitable protective clothing as protecting against splashing or contamination.
Hygiene Measures
Promptly remove any clothing that becomes contaminated. Always wash thoroughly after handling chemicals.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Colorless to yellow liquid</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.20-1.30</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt;200°F</td>
</tr>
<tr>
<td>pH Value</td>
<td>1.5-5.0</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless to mild</td>
</tr>
<tr>
<td>Solubility</td>
<td>7.5% in water</td>
</tr>
<tr>
<td>Pour Point</td>
<td>ND</td>
</tr>
<tr>
<td>Density</td>
<td>9.99 – 10.8 lbs/gal</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability
Normally stable.

Materials to Avoid
Avoid oxidizing agents, strong bases, aluminum.

Hazardous Decomposition Products
Carbon dioxide, bromine, cyanogen bromide, dibromoacetonitrile

Hazardous Polymerization
Not expected to occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Ingestion
LD50, Rat 510 mg/kg

Skin Absorption
LD50, Rabbit > 2,000 mg/kg

Inhalation
LC50, 4 h, Aerosol, Rat, female 1.25 mg/l
LC50, Aerosol, Rat, male 1.40 mg/l

Sensitization
Skin
A similar formulation with less active ingredient has caused allergic skin reactions when tested in Guinea pigs. Did not cause allergic skin reactions when tested in humans.

Repeated Dose Toxicity
Excessive exposure may increase the blood and tissue levels of bromine. Observations in animals include kidney effects following repeated ingestion of active ingredient, but no evidence of systemic toxicity following repeated dermal exposure at maximum attainable doses

Developmental Toxicity
For the active ingredient(s): Has been toxic to the fetus in lab animals at doses toxic to the mother. For the active ingredient(s): Did not cause birth defects in laboratory animals.

Reproductive Toxicity
No relevant information found.

Genetic Toxicology
For the active ingredient(s): In vitro genetic toxicity studies were negative. For the major component(s): Animal genetic toxicity studies were negative.
12. ECOLOGICAL INFORMATION

Polyethylene glycol
Movement & Partitioning
No bioconcentration is expected because of the relatively high water solubility.
Persistence and Degradability
Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

2,2-Dibromo-3-nitrilopropionamide
Movement & Partitioning
Bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Potential for mobility in soil is very high (Koc between 0 and 50). Movement of DBNPA in soil is expected to be reduced by rapid degradation (within minutes to hours).
Persistence and Degradability
Degradation is expected in the soil environment within minutes to hours. Chemical degradation (hydrolysis) is expected in the environment. Based on stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

Sodium bromide
Movement & Partitioning
Bioconcentration potential is low (BCF less than 100 or log Pow less than 3).
Bioconcentration Factor (BCF): < 40; fish; Measured
Persistence and Degradability
Biodegradation is not applicable.

ECOTOXICITY
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity
LC50, rainbow trout (Oncorhynchus mykiss), 96 h: 3.6 mg/l

Aquatic Invertebrate Acute Toxicity
EC50, water flea Daphnia magna, static, 48 h, immobilization: 2.5 mg/l

Aquatic Plant Toxicity
EC50, green alga Selenastrum capricornutum, static, Growth rate inhibition, 96 h: 1.5 mg/l
EC50, diatom Skeletonema costatum, biomass growth inhibition: 0.53 mg/l

13. DISPOSAL CONSIDERATIONS

Substance
Dispose of waste and residue in accordance with local authority requirements.

Container
As a substance. Used containers must not be cut up or punctured until completely purged of product residues.
14. TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>Emergency Response Guidebook</th>
<th>DOT Non-Bulk Shipping Name</th>
<th>DOT Bulk Shipping Name</th>
<th>DOT Label(s)</th>
<th>IATA Classification</th>
<th>IATA Label(s)</th>
<th>IMDG Classification</th>
<th>IMDG Label(s)</th>
<th>Marine Pollutant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Response Guidebook</td>
<td>DOT Not Regulated</td>
<td>DOT Not Regulated</td>
<td>DOT Not Regulated</td>
<td>Corrosive Liquid, Acidic, Organic, N.O.S. (2,2-Dibromo-3-nitrilopropionamide) Class 8, UN3265, PGIII</td>
<td>Corrosive</td>
<td>Corrosive Liquid, Acidic, Organic, N.O.S. (2,2-Dibromo-3-nitrilopropionamide) Class 8, UN3265, PGIII</td>
<td>Corrosive</td>
<td>No</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

DOT/CERCLA Reportable Quantity
SARA SECTION 313: This product contains the following substances subject to the reporting requirements of sections 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

2,2-Dibromo-3-nitrilopropionamide
Amount 20%

<table>
<thead>
<tr>
<th>HMIS/NPCA Rating</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NFPA Ratings</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

CANADA WHMIS Classification
D2A – Very toxic material
D2B – Toxic material
E – Corrosive

16. OTHER INFORMATION

Revision Date 19-Jul-07

Disclaimer
This product’s safety information is provided to assist our customers in assessing compliance with health, safety and environmental regulations. The information contained herein is based on data available to us and is believed to be accurate, although the company in this respect provides no guarantee or warranty. Since the use of this product is within the exclusive control of the user, it is the user’s obligation to determine the conditions of safe use of this product. Such conditions should comply with all federal regulations concerning the product.

This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.