1. **IDENTIFICATION OF THE SUBSTANCE AND COMPANY**

Chemical Family: Polymer, Algaecide 0.022% by weight

CAS no. 31512-74-0

Product Description: Clear liquid
Type of Product and use: Alternative to mixing algaecide into bath fluid

Supplier: Phoenix Products Company
55 Container Drive
Terryville, CT 06786
Telephone: (860)589-7502

Distributor: PolyScience
6600 W. Touhy Ave.
Niles, IL 60714
Telephone: (847)647-0611

Emergency Telephone: U.S. PERS Emergency Telephone 1-800-633-8253

2. **HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:**
Clear liquid
Irritating to eyes
Harmful if swallowed

**POTENTIAL HEALTH EFFECTS:**
- **Eye Contact:** Irritating to eyes, produces minimal effects in the form of erythema, chemosis, and discharge.
- **Skin Contact:** Will not cause skin irritation.
- **Inhalation:** N/A.
- **Ingestion:** Harmful if swallowed.

**NFPA Ratings (0-4):**
- Health 0
- Fire 0
- Reactivity 0

**HMIS Ratings (0-4):**
- Health 1
- Fire 0
- Reactivity 0

3. **COMPOSITION / INGREDIENTS INFORMATION**

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>CAS NO.</th>
<th>WEIGHT %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly(oxyethylene(dimethylinmino)ethylene(dimethyliminio)ethylenedichloride)</td>
<td>31512-74-0</td>
<td>0.022</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>99.978</td>
</tr>
</tbody>
</table>

4. **FIRST AID MEASURES**

**EYE CONTACT:**
Flush immediately with copious amounts of tap water or normal saline (minimum of 15 minutes).
Take exposed individual to a health care professional, preferably an ophthalmologist, for further evaluation.
SKIN CONTACT: Wash exposed area with plenty of water. Repeat washing. Remove contaminated clothing and wash thoroughly before reuse. If irritation persists consult a health care professional.

INGESTION: DO NOT INDUCE VOMITING. Rinse with copious amounts of water or milk. Irrigate the esophagus and dilute stomach contents by slowly giving one (1) to two (2) glasses of water or milk. Avoid giving alcohol or alcohol related products. In cases where the individual is semicarnosel, comatose, or convulsing, DO NOT GIVE FLUIDS BY MOUTH. Take individual to nearest medical facility.

5. **FIRE-FIGHTING MEASURES**

Suitable extinguishing media: Water fog, carbon dioxide, foam, dry chemical.

Extinguishing media not to be used: N/A.

Fire Fighting Procedure: Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode. Cool containers with water spray. On small fires, use water spray or fog. On large fires, use heavy deluge or fog streams. Flooding amounts of water may be required before extinguishment can be accomplished.

Unusual fire and explosion hazards: None.

6. **ACCIDENTAL RELEASE MEASURES**

PERSONAL PRECAUTIONS: Before responding to a spill or leak of this product, review each section of MSDS. Follow recommendations given in STORAGE AND HANDLING sections. Check Fire and Explosion Data to determine if the use of non-sparking tools is merited. Insure that spilled or leaked product does not come into contact with materials listed as incompatible. If irritating fumes are present, consider evacuation of enclosed areas.

METHODS FOR CLEANING UP: Initially minimize area affected by spill or leak. Block any potential routes to water systems (e.g. sewers, streams, lakes, etc.). Based on the product’s toxicological and chemical properties, and on the size and location of the spill or leak, assess the impact on contaminated environments (e.g. water systems, ground, air equipment, etc.). There are no methods available to completely eliminate any toxicity this product may have on aquatic environments. Determine if federal, state and/or local release notification is required (see Regulatory Classifications section of this MSDS).

**STORAGE AND HANDLING**

HANDLING: Avoid bodily contact. Do not take internally. Upon contact with skin or eyes, wash off with water. Eye fountains are recommended. Rubber gloves and safety glasses are required.

STORAGE: Store in a dry, cool, well-ventilated area away from incompatible materials (see "materials to avoid").

7. **EXPOSURE CONTROLS / PERSONAL PROTECTION**

EXPOSURE LIMITS:

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>ACGIH-TLV Data</th>
<th>OSHA (PEL) Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxyethylene(dimethylimino)ethylene(dimethyliminio)ethylene dichloride]</td>
<td>NOT DETERMINED</td>
<td>NOT DETERMINED</td>
</tr>
</tbody>
</table>

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Ventilation requirements: General room ventilation plus local exhaust should be used to minimize exposure to vapors.

Personal Protective Equipment: Wear safety glasses with side shields when handling this product. Wear rubber gloves when handling product. Avoid contact with skin.

-Skin and body protection:

Hygiene Measures: Remove and wash contaminated clothing before reuse.

Other Precautions: Facilities storing or utilizing this material should be equipped with an eyewash and safety shower.

8. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear pale yellow/brown liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
</tr>
<tr>
<td>Boiling point/Range:</td>
<td>&gt;100°C (212°F)</td>
</tr>
<tr>
<td>Melting point/Range:</td>
<td>-16°C (3.2°F)</td>
</tr>
<tr>
<td>Flash point:</td>
<td>Closed cup: &gt;100°C (212°F)</td>
</tr>
<tr>
<td>Auto-ignition temperature:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor pressure:</td>
<td>Not applicable under standard conditions</td>
</tr>
<tr>
<td>Evaporation rate (ether=1):</td>
<td>Not applicable under standard conditions</td>
</tr>
<tr>
<td>Vapor Density:</td>
<td>Not applicable under standard conditions</td>
</tr>
<tr>
<td>Water Solubility:</td>
<td>Soluble</td>
</tr>
<tr>
<td>pH</td>
<td>6 to 7</td>
</tr>
</tbody>
</table>

| Bulk Density:                  | 8.92 lb/gal                  |
| Specific gravity:              | 1.07                         |
| Decomposition Temperature:    | N/A                          |

9. STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.

MATERIALS TO AVOID: Anionic polymers

CONDITIONS TO AVOID: High temperature, poor ventilation, and/or contamination

HAZARDOUS DECOMPOSITION PRODUCTS: N/A.

HAZARDOUS POLYMERIZATION: Will not occur.

10. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

<table>
<thead>
<tr>
<th>Species</th>
<th>Route</th>
<th>LD50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Rat oral</td>
<td>0.429 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Female Rat oral</td>
<td>0.569 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Rabbit dermal</td>
<td>&gt;0.044 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Rat inhalation</td>
<td>0.000638 mg/l/4 hour</td>
<td></td>
</tr>
</tbody>
</table>

TARGET ORGAN EFFECTS: May cause damage to the following organs: Skin, eyes.

TARGET ORGAN EFFECTS: Prolonged exposure may cause damage to the respiratory system. Chronic inhalation exposure may cause impairment of lung function and permanent lung damage.
11. ECOLOGICAL INFORMATION

AQUATIC TOXICITY:
96 Hour-LC50, Fish:
5.72 \(10^{-5}\) mg/l (Fathead minnow)
4.62 \(10^{-5}\) mg/l (Bluegill sunfish)
1.03 \(10^{-5}\) mg/l (Rainbow trout)
>0.132 mg/l (Sheepshead minnow)
0.00286 mg/l (Mysid shrimp)
8.14 \(10^{-5}\) mg/l (Invertebrate)

12. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Do not contaminate water, food, or feed by storage or disposal or cleaning of equipment. Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor. Contact with incompatible materials could cause a reaction or fire.

CONTAINER: Nonrefillable container. Do not refill or reuse this container. Triple rinse or equivalent before discarding in trash.

13. TRANSPORTATION INFORMATION

DOT Classification: When this product is packaged in liquid-tight, plastic inner packages containing less than 1.3 gallons (5.0 Liters) net capacity each, and it is packed in strong outer packaging, distributed and labeled for consumer use, it is renamed “Consumer Commodity”.

UN No.: None
Proper Shipping Name: Consumer Commodity
Hazard Class: None Hazardous

ICAO/IATA: Not regulated

14. REGULATORY INFORMATION

FIFRA: N/A
FDA: This product is not allowed for food contact uses.

SARA: N/A

NSF: This product is listed by the NSF under NSF/ANSI Standard 60 for use in potable water applications with the following maximum allowable use rates: Concentrations of 2-5 ppm can be used at the initiation of treatment for up to 21 days. Thereafter, the maximum use rate is 0.5 ppm for potable water systems.

15. OTHER INFORMATION

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER NATURE, ARE MADE HEREBUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

REVISION 07-14-2011 AS

END OF MATERIAL SAFETY DATA SHEET