MATERIAL SAFETY DATA SHEET

Product(s): ACCO Algaecide 30 Concentrate-L

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product
Chemical Name: Poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride]
CAS #: 31512-74-0
Issue Date: April 10, 2011

Company Identification
Supplier
ACCO Unlimited Corporation
5300 NW 55 Avenue
Johnston, IA  50131
(515) 278-0487

FOR CHEMICAL EMERGENCY, CALL CHEMTREC (24 HOURS): 1-800-424-9300

SECTION 2: HAZARDS IDENTIFICATION

Effects from Acute Exposure:
Eye Exposure: Slightly hazardous in case of eye contact (irritant).
Skin Exposure: Slightly hazardous in case of skin contact (irritant). Non-sensitizer to skin. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.
Inhalation: Slightly hazardous in case of inhalation. Effects will depend on concentration and length of time of exposure.
Ingestion: Ingestion is not expected to be a primary route of exposure.

Effects from Chronic Exposure:
The effects from chronic exposure to this product have not been fully evaluated.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>% by Weight</th>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poly[oxyethylene(dimethyliminio)ethylene(dimethyliminio)ethylene dichloride]</td>
<td>31512-74-0</td>
<td>60</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

While some substances are claimed as trade secret in accordance with the provision of OSHA 29 CFR 1910.1200(i), all known hazards are clearly communicated within this document.

SECTION 4: FIRST AID MEASURES

Eye Exposure: 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 Exposure: 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.
Inhalation: If exposure by inhalation is suspected, immediately move exposed individual to fresh air. If individual experiences nausea, headache, dizziness, has difficulty in breathing or is cyanotic, seek a health care professional immediately.
Ingestion: DO NOT INDUCE VOMITING. Rinse with copious amounts of water or milk, first. 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 semi-comatose, comatose or convulsing, DO NOT GIVE FLUIDS BY MOUTH. In case of intentional ingestion of the product seek medical assistance immediately; take individual to nearest medical facility.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Limits: Not available.
Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.
Special Firefighting Procedures: Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill and Leak Response Guidelines:
Important: Before responding to a spill or leak of this product, review each section of this MSDS. Check Section 5: Fire fighting Measures 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 (Section 10). If irritant fumes are present, consider evacuation of enclosed areas.

Initially minimize area affected by the 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. Minimize adverse effects on these environments. Determine if federal, state, and/or local release notification is required (see Section 15: Regulatory Information). Recover as much of the pure product as possible into appropriate containers. Later, determine if this recovered product can be used for its intended purpose. Address clean-up of contaminated environments. Spill or leak residuals may have to be collected and disposed of. Clay, soil, or commercially available absorbents may be used to recover any material that cannot readily be recovered as pure product. Flushing residual material to an industrial sewer, if present at the site of a spill or leak incident, may be acceptable if authorized approval is obtained. If product and/or spill/leak residuals are flushed to an industrial sewer, insure that they do not come into contact with incompatible materials. Contact the person(s) responsible for the operation of your facility's industrial sewer system prior to intentionally flushing or pumping spills or leaks of this product to the industrial sewer.

SECTION 7: HANDLING AND STORAGE

Satisfactory Materials of Construction

<table>
<thead>
<tr>
<th>Buna-N rubber</th>
<th>PVC – flexible</th>
<th>Hypalon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butyl rubber</td>
<td>Fiberglass</td>
<td>Polyethylene – high density</td>
</tr>
<tr>
<td>Polypropylene</td>
<td>Neoprene</td>
<td>Stainless steels 304 and 316</td>
</tr>
<tr>
<td>Plexiglas</td>
<td>Polyethylene – low density</td>
<td>ABS (Plastic)</td>
</tr>
<tr>
<td>Teflon</td>
<td>Tygon</td>
<td>Morton test liner (108 T 44LV)</td>
</tr>
<tr>
<td>PVC – rigid</td>
<td>Tyrol 880</td>
<td>6/6 Nylon</td>
</tr>
<tr>
<td>Viton</td>
<td>Gum rubber</td>
<td>FRP lined mild steel</td>
</tr>
<tr>
<td>EPDM rubber</td>
<td>Silicone rubber</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye-wash fountains in the work place are recommended. Rubber gloves, safety glasses or goggles and body protective clothing and shoes are required. The handling precautions for this product are based on the characteristics of the neat product unless otherwise specified.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance:</td>
<td>Clear, pale yellow, liquid.</td>
</tr>
<tr>
<td>Odor:</td>
<td>Mild.</td>
</tr>
<tr>
<td>Density:</td>
<td>1.15</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>Closed cup: &gt; 100°C (212°F). (Tagliabue.)</td>
</tr>
<tr>
<td>Melting/Freezing Point:</td>
<td>-16°C (3.2°F).</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>&gt; 100°C (212°F)</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Easily soluble in cold water. Easily soluble in hot water.</td>
</tr>
<tr>
<td>pH (Neat):</td>
<td>7 [Neutral.]</td>
</tr>
<tr>
<td>pH (100 ppm in water):</td>
<td>6 - 7.</td>
</tr>
<tr>
<td>Vapor Pressure:</td>
<td>Not available.</td>
</tr>
<tr>
<td>o/w Partition Coefficient:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Oxidizing/Reducing Properties:</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity:</td>
<td>Kinematic: 125 cSt.</td>
</tr>
<tr>
<td>Additional pH Information:</td>
<td>pH (neat) = 6.0 – 8.0.</td>
</tr>
</tbody>
</table>

NOTE: The physical data presented above are typical values and should not be construed as specifications.

SECTION 10: STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability:</td>
<td>Stable under normal conditions of use and storage.</td>
</tr>
<tr>
<td>Incompatibility:</td>
<td>Anionic polymers.</td>
</tr>
<tr>
<td>Hazardous Decomposition Products:</td>
<td>Carbon monoxide may be formed upon burning.</td>
</tr>
</tbody>
</table>
SECTION 11: TOXICOLOGICAL INFORMATION

Acute Effects:
- Acute Oral (LD50) = 1951 mg/kg Male rat
- Acute Oral (LD50) = 2587 mg/kg Female rat
- Acute Dermal (LD50) = > 2000 mg/kg Rabbit
- Acute Inhalation (LD50) = 2.9 mg/l (4 hours) Rat

Irritant/Sensitization Effects:
- Slightly hazardous in case of eye contact (irritant).
- Slightly hazardous in case of skin contact (irritant). Non-sensitizer to skin. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.
- Slightly hazardous in case of inhalation. Effects will depend on concentration and length of time of exposure.

Carcinogenic Potential:
- A two year rat carcinogenicity study showed a slight increase in c-cell adenomas in female rats. Studies with male rats and male and female mice did not show any evidence of carcinogenic response. This product is not considered a carcinogen.

Target Organs Effects:
- May cause damage to the following organs: upper respiratory tract, skin, eyes.

Other Health Effects:
- None known.

SECTION 12: ECOLOGICAL INFORMATION

LC50 = 0.37 mg/l 48 hours Invertebrate
LC50 = 0.26 mg/l 96 hours Fathead minnow
LC50 = 0.21 mg/l 96 hours Bluegill sunfish
LC50 = 0.047 mg/l 96 hours Rainbow trout
LC50 = > 600 mg/l 96 hours Sheephead minnow
LC50 = 13 mg/l 96 hours Mysis shrimp

SECTION 13: DISPOSAL CONSIDERATIONS

Note: Follow federal, state, and local regulations governing the disposal of waste materials.

Contaminated Materials: Determine if waste containing this product can be handled by available industrial effluent system or other on-site waste management unit. If off-site management is required, contact a company experienced in industrial waste management. This product is not specifically listed in 40 CFR 261 as a Resource Conservation and Recovery Act (RCRA) hazardous waste. However, spill or leak residuals may meet the criteria of a characteristic hazardous waste under this Act. Check the characteristics of the material to be disposed of and/or the physical and reactivity data given in this MSDS for the neat product.

Container Disposal: Empty containers, as defined by appropriate sections of the RCRA, are not RCRA hazardous wastes. However, insure proper management of any residuals remaining in container.

SECTION 14: TRANSPORT INFORMATION

DOT Shipping Information: Not Regulated.
IMO/IMDG Shipping Information: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (Cationic Polymer), Class 9, P.G. III, MARINE POLLUTANT, (EmS No. F-A, S-F, ERG Guide 171, HazMat Code 4960131)
IATA Shipping Information: Not Regulated.
DOT “RQ”: NONE

Unless otherwise stated, the shipping information provided above applies only to non-bulk containers of this product. Proper shipping name and general shipping information may vary depending on packaging and mode of shipment.
SECTION 15: REGULATORY INFORMATION

The following Regulations are known to apply to the use and disposal of this product. Additional Federal, State and Local regulations may also be applicable.

**SARA (Superfund Amendments and Reauthorization Act)**

SARA 302 Extremely Hazardous Substances List …
No components of this product are listed.

SARA 312 Hazard Category …
Immediate (Acute) Health Hazard

SARA 313 Toxic Chemicals List …
No components of this product are present above the de minimus levels.

**CERCLA (Comprehensive Environmental Response, Compensation and Liability Act)**

No components of this product are present above the de minimus levels.

**RCRA (Resource Conversation and Recovery Act) Listed Hazardous Waste**

No components of this product are listed.

**CWA (Clean Water Act) Listed Substances**

No components of this product are listed.

**FDA (Food and Drug Administration)**

This product is not allowed for food contact uses.

**National Sanitation Foundation (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.

**TSCA (Toxic Substances Control Act) Applicability**

All components may not be listed on the TSCA Inventory. Registered pesticides are exempt from the requirements of TSCA.

**FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act)**

This product is a registered pesticide. EPA Reg. No. 1448-32

**HMIS/NPCA Ratings …**

Health: 1  Flammability: 1  Reactivity: 0

**NFPA Ratings …**

Health: 1  Flammability: 1  Reactivity: 0

**State Regulations**

Various State Right To Know Acts …
Non-proprietary hazardous chemicals are listed in Section 3 of this MSDS.

SECTION 16: OTHER INFORMATION

The information contained herein is provided in good faith and is believed to be correct as of the date hereof. However, ACCO Unlimited Corporation makes no representation as to the comprehensiveness or accuracy of the information. It is expected that individuals receiving the information will exercise their independent judgment in determining its appropriateness for a particular purpose. Accordingly, ACCO Unlimited Corporation will not be responsible for damages of any kind resulting from the use of or reliance upon such information. No representations, or warranties, either express or implied, or merchantability fitness for a particular purpose or of any other nature are made hereunder with respect to the information set forth herein or to the product to which the information refers.