Material Safety Data Sheet


Section I: Product Identification

Product: 655-579 Prentox(R) Lindane 20% Emulsifiable Concentrate

Manufacturer's Name: Prentiss Incorporated
C. B. 2000
Floral Park, NY 11001
Telephone Number: (516) 326-1919

Date Prepared: January 20, 1994

Supersedes: September 9, 1993

Reason: Revision of section VI.

Section II: Hazardous Ingredients/Identity Information

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lindane (CAS # 58-39-9)</td>
<td>0.5 mg/M³</td>
<td>0.5 mg/M³</td>
<td>20.00</td>
</tr>
<tr>
<td>(Gamma isomer of benzene hexachloride, from Lindane)</td>
<td>TWA (Skin)</td>
<td>TWA (Skin)</td>
<td></td>
</tr>
<tr>
<td>NICSH recommended TWA (Skin)</td>
<td>0.5 mg/M³</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Xylene Range Aromatic Solvent (CAS # 64742-95-6)</td>
<td>See below</td>
<td>62.50</td>
<td></td>
</tr>
<tr>
<td>Contains the following SARA listed ingredients, by weight (typical):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,2,4-Trimethyl Benzene (CAS # 95-63-6)( &lt; &gt; )</td>
<td>32.0</td>
<td>(TWA) 25 ppm</td>
<td></td>
</tr>
<tr>
<td>Mixed Xylenes (CAS # 1330-20-7)( &lt; &gt; )</td>
<td>3.0</td>
<td>(TWA) 100 ppm</td>
<td></td>
</tr>
<tr>
<td>Cumene (CAS # 98-82-8)( &lt; &gt; )</td>
<td>1.5</td>
<td>(TWA) 50 ppm</td>
<td></td>
</tr>
<tr>
<td>Ethyl Benzene (CAS # 100-41-4)( &lt; &gt; )</td>
<td>0.5</td>
<td>(TWA) 100 ppm</td>
<td></td>
</tr>
<tr>
<td>Cyclohexanone (CAS # 108-94-1)</td>
<td>50 ppm</td>
<td>25 ppm</td>
<td>10.00</td>
</tr>
<tr>
<td>Emulsifier 1 (CAS # N/A)</td>
<td>N/D</td>
<td>3.00</td>
<td></td>
</tr>
<tr>
<td>Emulsifier 2 (CAS # N/A)</td>
<td>N/D</td>
<td>4.50</td>
<td></td>
</tr>
</tbody>
</table>

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372. Any copies or redistribution of this MSDS must include this notice.
Section III: Physical/Chemical Characteristics

Boiling Point: N/D

Specific Gravity (H₂O = 1): 0.9834

Vapor Pressure (mmHg): N/D

Melting Point: N/A

Vapor Density (Air = 1): N/D

Evaporation Rate (Butyl Acetate = 1): N/D

Solubility in Water: Emulsifies

Appearance and Odor: Water white liquid, aromatic solvent odor.

Section IV: Fire and Explosion Hazard Data

Flash Point (Method Used): 105°F.

Flammable Limits: LEL: 1.9 UEL: 12.6 (Solvent - approximate)

NFPA Hazard Ratings: Health: 2 Flammability: 2 Reactivity: 0

Extinguishing Media: Dry chemical, Water Spray, foam. (1990 Emergency Response Guidebook, DOT P 5800.5)

Special Fire Fighting Procedures: Wear self contained breathing apparatus that has a full face piece and is operated in a pressure demand or other positive pressure mode. Prevent spread of contaminated runoff.

Unusual Fire and Explosion Hazards: This pesticide is toxic to fish, birds and other wildlife. Do not allow contaminated runoff to enter lakes, streams, ponds, estuaries, oceans or public waters. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority.

Section V: Reactivity Data

Stability: Stable.

Conditions to avoid for stability: Avoid exposure to high temperatures and strong alkalies.

Incompatibility: Excessive heat, strong alkalies and powdered metals (i.e.: iron, aluminum and zinc). N,N-Dimethylacetamide is exothermic and may cause violent reaction. Dimethylformamide + iron may cause dangerous reaction.

Hazardous Decomposition or Byproducts: Carbon oxides, phosgene, toxic and corrosive fumes of chlorides.
**Hazardous Polymerization:** Will not occur.

**Conditions to avoid for Hazardous Polymerization:** None.

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**Section VI: Health Hazard Data**

**Routes of Exposure:**

**Inhalation:** Yes.

**Skin:** Yes.

**Ingestion:** Yes.

**Health Hazards (Acute and Chronic) and Signs and Symptoms of Overexposure:**

**Inhalation:** Irritant/convulsant. 1000 mg/M³ concentration may be immediately dangerous to life or health. **Acute Exposure:** Vapors may cause irritation of nose, throat and mucous membranes. Lindane may be absorbed from the lungs and produce central nervous system effects with symptoms of motor hyperexcitability that may include muscle twitching, myoclonic jerking, and convulsive seizures. The convulsions may occur with periods of unconsciousness. Other symptoms may include headache, nausea, vomiting, malaise and dizziness. In cases of gross overexposure, convulsions may occur without any prior symptoms. Abnormal EEG patterns may be observed; these changes in EEG patterns may persist for weeks or months while no other observable signs of poisoning may exist. **Chronic Exposure:** Prolonged or repeated exposure may cause symptoms as described in acute exposure. Symptoms of depression, headache, vomiting, asthenia, epileptiform attacks, sleeplessness, profuse perspiration, various abnormal reflexes and neurological signs were reported in one case of occupational exposure. Several incidences of diminution of vision and blindness have also been observed. Reports suggest that Lindane is capable of causing blood dyscrasias, primarily aplastic anemia. However, these reports have not been confirmed. Cirrhosis and chronic hepatitis were observed in liver biopsies from 8 workers heavily exposed to Lindane, DDT or both for 5 - 13 years.

**Skin Contact:** Irritant/convulsant/highly toxic. **Acute exposure:** May cause irritation. A lethal dose in rabbits by dermal absorption was 50 mg/kg. Lindane may be absorbed through the skin and produce the same acute and chronic symptoms listed above.

**Eye contact:** Irritant. **Acute exposure:** may cause irritation. **Chronic exposure:** Prolonged or repeated exposure may cause conjunctivitis.

**Ingestion:** Convulsant/carcinogen/toxic. **Acute exposure:** A lethal dose in rats was 76 mg/kg. Symptoms of malaise, faintness, dizziness, nausea, vomiting, muscle spasms, ataxia, restlessness, tremors, cyanosis and facial pallor were reported in cases of accidental poisoning. Clonic and tonic convulsions along with unconsciousness were also characteristic symptoms of poisoning. Postical coma of variable duration leading to respiratory failure occurred in fatal cases. In some cases, retrograde amnesia was reported. **Chronic exposure:** Disturbances of the estrous cycle, decreased fertility, and lowered embryo viability with delayed physical development was reported in a study of female rats fed daily doses of 0.5 mg/kg for four months. An increase in incidence of stillborn pups was observed in litters of female beagles fed lindane during pregnancy. Repeated feeding to rats of 800 ppm in the diet resulted in mild liver damage; kidney damage occurred at higher levels. Mice fed 400 ppm in the diet developed liver tumors and, in some cases, lung metasteses.
**Toxicity of other components:** This product contains a Xylene Range Aromatic Solvent composed of xylenes, ethylbenzenes and aromatic naphtha containing trimethylbenzenes. Inhalation of solvent vapors at high concentrations can cause central nervous system depression, respiratory tract irritation, asphyxiation, cardiac stress, and coma. Exposure to extremely high levels of xylenes may cause kidney or liver damage.

**Carcinogenicity:**

NTP: Anticipated human carcinogen.

IARC Monographs: Human inadequate evidence, animal limited evidence (IARC group 2B)

OSHA Regulated: No.

Lindane produced benign and malignant tumors in mice after oral administration.

**Medical Conditions Generally Aggravated by Exposure:**

Persons with kidney, liver and blood diseases may be at increased risk from exposure.

**Emergency and First Aid Procedures:**

If swallowed, Call a physician or Poison Control Center immediately. Drink 1 or 2 glasses of water and induce vomiting by touching the back of throat with a finger. Do not give anything by mouth to an unconscious person. If inhaled, Remove victim to fresh air and apply respiration if indicated. If on skin, wash promptly with soap and water. Rinse thoroughly. If in eyes, Rinse eyes with plenty of water and call a physician immediately.

**Section VII: Precautions for Safe Handling and Use**

**Steps to be taken in case material is released or spilled:**

Wear protective equipment as required to prevent contact with the product or its vapors. Cover the spilled areas with generous amounts of absorbent material, such as clay, diatomaceous earth, sand or sawdust. Sweep the contaminated absorbent onto a shovel and put the sweepings into a salvage drum. Dispose of wastes as below. SARA Section 304 reportable quantity for lindane is 1 pound. Spills in excess of five pints of this product must be reported to the Local Emergency Planning Committee. If the release is reportable under CERCLA Section 103, the National Response Center must immediately be notified at (800) 424-8802 or (202) 426-2675 in the immediate Washington D.C. area. The California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) prohibits contaminating any known source of drinking water with substances known to cause cancer and, or reproductive toxicity.

**Waste disposal method:**

Pesticide wastes are toxic. Improper disposal of excess pesticide or rinsate is a violation of Federal Law. If these wastes
cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA office for guidance. **Container disposal:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by State and local authorities. Disposal must be in accordance with standards applicable to generators of hazardous waste, 40 CFR 262. EPA hazardous waste number U129. Lindane regulatory level 0.4 mg/L. Materials which contain lindane at or above the regulatory level meet the EPA characteristic of toxicity, and must be disposed of in accordance with 40 CFR 262. EPA hazardous waste number D013.

**Precautions for handling and storage:**

Protect against physical damage. Store in a cool, dry, well ventilated place, away from any area where the fire hazard may be acute. Outside or detached storage may be preferred. Avoid storage at temperatures in excess of 120°F as this may cause bursting of container. Do not use, pour or spill near heat or open flame.

**Other precautions:**

Periodically inspect stored materials.

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**Section VIII: Control Measures**

**Respiratory protection:**

The following respirators and maximum use concentrations are recommended by the U.S. Department of Health and Human Services, NIOSH Pocket Guide to chemical hazards; NIOSH criteria documents, or by the U.S. Department of Labor, 29 CFR 1910 Subpart Z.

The specific respirator selected must be based on contamination levels found in the work place, must not exceed the working limits of the respirator and be jointly approved by NIOSH and the Mine Safety and Health Administration (NIOSH-MSHA).

5 mg/M³ Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s) in combination with a dust, mist, and fume filter.

12.5 mg/M³ Any powered, air purifying respirator with organic vapor cartridge(s) in combination with a dust, mist, and fume filter.

Any supplied air respirator operated in continuous flow mode.

25 mg/M³ Any chemical cartridge respirator with a full facepiece and organic vapor cartridge(s).

Any self contained breathing apparatus with a full face piece and organic vapor cartridge(s).

Any supplied air respirator with a full face piece.

Any air purifying, full face piece respirator (gas mask) with a chin style, front or back mounted organic vapor canister.

Any powered, air purifying respirator with a tight fitting face piece and organic vapor cartridge(s).
1000 mg/Ms Any supplied air respirator that has a full face piece and is operated in a pressure demand or other positive pressure mode.

Escape Any air purifying, full face piece respirator (gas mask) with a chin style, front or back mounted organic vapor canister.

Any appropriate, escape type, self contained breathing apparatus.

**Ventilation:**

**Local Exhaust:** As required to meet workplace TWA standards.

**Special:** As required to meet workplace TWA standards.

**Mechanical:** As required to meet workplace TWA standards.

**Other:** As required to meet workplace TWA standards.

**Protective Gloves:** Use chemical resistant gloves to prevent contact with this substance.

**Eye Protection:** Splash proof safety goggles and a face shield to prevent contact with this product.

**Other protective clothing or equipment:** Wear appropriate protective (impervious) clothing and equipment to prevent any possibility of skin contact with this product. Where there is any possibility that an employees eyes and/or skin may be exposed to this substance, the employer should provide an eye wash fountain and quick drench shower within the immediate work area for emergency use.

**Work/Hygienic practices:** Wash thoroughly after handling and before eating and smoking.

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.