Product: Gowan Endosulfan 3EC
Formulator: Gowan Company
P.O. Box 5569
Yuma, Arizona 85366-5569
(520) 783-8844

Emergency Phone: (520) 783-3803
For 24-Hour Emergency Assistance (Spill, Leak, Fire, or Exposure), Call CHEMTREC®:
Inside the U.S.: (800) 424-9300
Outside the U.S.: (703) 527-3887
For MEDICAL Emergency:
(800) 225-5635 ext. 283

1. CHEMICAL IDENTIFICATION

<table>
<thead>
<tr>
<th>Product:</th>
<th>Endosulfan 3EC</th>
<th>EPA Signal Word:</th>
<th>Danger-Poison</th>
<th>EPA Registration No.:</th>
<th>10163-110</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Ingredient:</td>
<td>Endosulfan (34.0%)</td>
<td>CAS No.:</td>
<td>115-29-7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Name:</td>
<td>Hexachlorohexahydromethano-2,4,3-benzodioxathiepin 3-oxide</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical Class:</td>
<td>Organochlorine Pesticide</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>INGREDIENT NAME</th>
<th>OSHA – PEL</th>
<th>ACGIH – TLV</th>
<th>OTHER</th>
<th>NTP/IARC/OSHA CARCINOGEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endosulfan (34.0%)</td>
<td>Not applicable</td>
<td>0.1 mg/m³</td>
<td>Not established</td>
<td>No</td>
</tr>
<tr>
<td>Xylenes; Mixed O, M, &amp; P Isomers (11.6%)</td>
<td>435 mg/m³</td>
<td>435 mg/m³</td>
<td>Not established</td>
<td>No</td>
</tr>
<tr>
<td>Ethyl Benzene (2.3%)</td>
<td>200 ppm</td>
<td>100 ppm</td>
<td>Not established</td>
<td>No</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Physical Properties
Appearance: Brown to amber liquid
Odor: Solvent odor

Symptoms of Overexposure
Symptoms associated with endosulfan ingestion in humans are vomiting, agitation, epileptiform convulsions, cyanosis, dyspnea, dizziness, weakness, vertigo, headache and disorientation. This formulation also contains mixed aromatic hydrocarbons, including xylene. Inhalation of aromatic hydrocarbon vapors may cause central nervous system depression, dizziness, disturbances in vision, and respiratory irritation.

Medical Conditions Likely to be Aggravated by Exposure
Pre-existing liver, kidney and nervous conditions may be aggravated by exposure.

Primary Routes of Exposure
Acute and chronic effects from overexposure may result from inhalation, ingestion, or absorption through the skin.

Hazardous Decomposition Products
CO, CO₂, hydrogen chloride, and oxides of sulfur

Gowan Company
P.O. Box 5569
Yuma Arizona 85366-5569
Emergency Telephone: (520) 783-3803
Page 1 of 6
3. HAZARDS IDENTIFICATION (continued)

Unusual Fire, Explosion, and Reactivity Hazards
Evacuate all areas where fire seriously threatens containers. Overheated, sealed containers are an explosion hazard. Vapors, which form inside empty containers, may also be an explosion hazard under fire conditions. This product is a combustible liquid.

4. FIRST AID MEASURES

If poisoning is suspected, immediately contact a physician, the nearest hospital, or the nearest Poison Control Center. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

**Ingestion:** Call a physician or Poison Control Center immediately. If possible, vomiting should be induced under medical supervision. Drink one or two glasses of water and induce vomiting by giving one (1) ounce of syrup of ipecac, if available, or by touching the back of the throat with finger. Do not induce vomiting or give anything by mouth to a person who is unconscious or convulsing.

**Inhalation:** Remove victim to fresh air. Apply artificial respiration if indicated. Get medical attention.

**Eye Contact:** Flush with plenty of water for 15 minutes. Call a physician immediately.

**Skin Contact:** Remove contaminated clothing and wash skin with soap and water. Get medical attention.

Note to Physician
Endosulfan is a central nervous system stimulant ingested by mouth, inhalation or through contact with skin. It may cause convulsions. There is no specific antidote. Diazepam I.V. is the drug of choice. Barbituric acid derivatives such as Phenobarbital may be used additionally. A neuromuscular blocking agent may be used if convulsions persist. This type of drug may be used only if complete control of respiration can be maintained. Epinephrine derivatives are absolutely contraindicated.

!! IN ALL CASES OF SUSPECTED POISONING, GET MEDICAL ATTENTION IMMEDIATELY !!

For emergency MEDICAL response and hazard communication ONLY, call:
Hazard Information Services at (800) 228-5635 ext. 283.

5. FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashpoint (test method)</td>
<td>105° F (TCC)</td>
</tr>
<tr>
<td>Flammable Limits (% in air)</td>
<td>Not available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>Not available</td>
</tr>
</tbody>
</table>

**Appropriate Extinguishing Media**
Use water spray, fog, dry chemical, or carbon dioxide.

**Fire Fighting Guidance**
Isolate fire area. Evacuate downwind residents. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke or vapors generated. Try to keep containers cool with soft stream water fog. If no other options are available, water may be used, but diking is required to keep contaminated water out of all water sources. Toxic, irritating gases may be formed. Attempt to cool drums.

**Unusual Fire, Explosion, and Reactivity Hazards**
Evacuate all areas where fire seriously threatens containers. Overheated, sealed containers are an explosion hazard. Vapors, which form inside empty containers, may also be an explosion hazard under fire conditions. This product is a combustible liquid.
6. ACCIDENTAL RELEASE MEASURES

In Case of Spills or Leaks
Avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Wear prescribed protective clothing and equipment. Keep material out of streams and sewers. Confine spill. If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents. Vacuum, shovel or pump wastes into an approved drum. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e., organic solvent, detergent, bleach or caustic), and add the solution to the drums of wastes collected. Label drums for contents. Dispose of drummed wastes, including decontamination solution, according to the method outlined in Section 13 – Disposal Considerations. Open dumping or burning of this material or its packaging is prohibited.

7. HANDLING AND STORAGE

Precautions in Storing
DO NOT contaminate water, food or feed by storage or disposal. Use with adequate ventilation. Do not reuse empty container.

Storage
Do not store in or around the home. Do not store below 20°F (-7°C). Do not use or store near heat, open flame, or hot surfaces. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lid and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls
Thoroughly ventilate all transport vehicles prior to unloading. Store in a well-ventilated area. Use local exhaust at all process locations to control employee exposure.

Personal Protection

Eye/Face
Protective eyewear is required.

Skin Protection
Applicators and other handlers must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate or Viton ≥ 14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, and a chemical resistant apron when cleaning equipment, mixing, or loading.

Respiratory Protection
Wear a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides or a canister approved for pesticides.

Additional Protection

Information
Emergency eyewash fountain should be located nearby. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:
Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Thoroughly wash the outsides of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Brown to amber liquid
Odor: solvent odor
Melting Point: Not applicable
Boiling Point: 290° F
Specific Gravity/Density: 1.06
Solubility in H₂O
Endosulfan: Emulsifies
Vapor Pressure
Endosulfan: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur
Polymerization: Decomposition
Products: CO, CO₂, hydrogen chloride, oxides of sulfur
Hazardous Mixtures: Not available
Conditions To Avoid: Excessive heat and fire, moisture, acids, alkalis and oxidizers. Thermal decomposition and burning may produce toxic by-products.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies
Ingestion: Not available
Dermal: Not available
Inhalation: Not available
Eye Contact: Irritating
Skin Contact: Irritating
Skin Sensitization: May occur

Mutagenic Potential
Endosulfan: None available
Reproductive Hazard Potential
Endosulfan: None available
Chronic/Subchronic Toxicity Studies
Endosulfan: None available
Carcinogenic Potential
None
Other Toxicity Information
Not available
12. ECOLOGICAL INFORMATION

Summary of Effects

Endosulfan

This product is toxic to fish, birds, and other wildlife. Birds feeding on treated areas may be killed. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Due to the risk of runoff and drift, do not apply within a distance of 300 feet of lakes, ponds, streams, and estuaries. Shrimp and crab may be killed at application rates recommended on this label. Do not apply where fish, shrimp, crab, and other aquatic life are important resources. This product must not be used in areas where impact on threatened endangered species is likely. Contact your State Fish and Game Agency before applying this product. Apply this product only as specified on the label. This pesticide is toxic to bees exposed to direct application. Applications should be timed to coincide with periods of minimum bee activity, usually between late evening and early morning.

Other Environmental Information Use Precautions

Not available

13. DISPOSAL CONSIDERATION

Pesticide Disposal

Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, 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 Regional 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. Do not cut or weld metal containers.

Hazardous Information

None

14. TRANSPORT INFORMATION

DOT Classification

RQ, Organochlorine Pesticide, Liquid, Toxic, Flammable, (Endosulfan), 6.1, UN 2995, PG III, NAERG# 131 (Add “Marine Pollutant” if shipped by water)

International Maritime Organization

RQ, Organochlorine Pesticide, Liquid, Toxic, Flammable, (Endosulfan), 6.1, UN 2995, PG III, Marine Pollutant, EmS 6.1-01, MFAG 500, NAERG# 131

International Civil Aviation Organization

RQ, Organochlorine Pesticide, Liquid, Toxic, Flammable, (Endosulfan), 6.1, UN 2995, PG III, Marine Pollutant, NAERG# 131

15. REGULATORY INFORMATION

SARA Title III Classification

Section 302/304: Not applicable
Section 311/312: Immediate (acute) health hazard
Delayed (chronic) health hazard
Fire hazard

Section 313 chemical(s): Xylene, Ethyl Benzene

Proposition 65

Not applicable

CERCLA Reportable Quantity (RQ)

0.33 gal. of product (1 lb. of Endosulfan)
15. REGULATORY INFORMATION (continued)

RCRA Classification
Not applicable

TSCA Status
Exempt from TSCA

16. OTHER INFORMATION

NFPA Hazard Ratings

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<tr>
<th>Rating</th>
<th>Description</th>
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<tr>
<td>0</td>
<td>Least</td>
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<tr>
<td>1</td>
<td>Slight</td>
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<td>2</td>
<td>Moderate</td>
</tr>
<tr>
<td>3</td>
<td>High</td>
</tr>
<tr>
<td>4</td>
<td>Severe</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NFPA Hazard Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health: 2</td>
</tr>
<tr>
<td>Flammability: 2</td>
</tr>
<tr>
<td>Reactivity: 0</td>
</tr>
</tbody>
</table>

Notice: The information and recommendations contained herein are provided in good faith and 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 herein.

Prepared By:
Gowan Company
(520) 783-8844

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