FOR EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT, CALL:
CHEMTREC 1-800-424-9300

Material Safety Data Sheet

Section 1—Chemical Product and Company Identification

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Grizzly Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPA Reg. No.:</td>
<td>1381-211</td>
</tr>
<tr>
<td>Common Name:</td>
<td>Pyrethroid insecticide</td>
</tr>
<tr>
<td>Chemical Description:</td>
<td>[1a(S*),3a(Z)]-cyano(3-phenoxophenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate</td>
</tr>
</tbody>
</table>

Manufactured For:
WINFIELD SOLUTIONS, LLC
P. O. Box 64589
St. Paul, MN 55164-0589

Medical Emergency Telephone Number:
1-877-424-7452

MSDS Revision Date: 12/10/2012
Supersedes document dated 01/08/2008

Section 2—Hazards Identification

Emergency Overview: Blue opaque liquid (capsule suspension). Product may cause oxygen deficiency in confined spaces; follow all OSHA regulations pertaining to confined space entry. Harmful if swallowed or inhaled. See health effects below.

WARNING: Keep out of reach of children.

Route(s) of Entry: Eyes, Inhalation, Skin, and Ingestion.

Health Hazards (Acute and Chronic):
- Inhalation: Inhalation of mist may cause irritation of the upper respiratory tract. Vapors may cause drowsiness and dizziness.
- Eyes: Causes mild irritation of eyes.
- Skin: Contact causes skin irritation. May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.
- Ingestion: Harmful if swallowed.

Medical Conditions Generally Aggravated by Exposure:
None known. Preexisting respiratory conditions may be aggravated by exposure to mists.

Section 3—Composition Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>% (wt)</th>
<th>CAS reg. #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lambda-Cyhalothrin</td>
<td>11.4%</td>
<td>91465-08-6</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>&lt; 1.5%</td>
<td>91-20-3</td>
</tr>
<tr>
<td>Propylene Glycol</td>
<td></td>
<td>57-55-6</td>
</tr>
<tr>
<td>Petroleum Solvent</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Ingredients not specifically listed are non-hazardous and considered to be confidential business information.

Section 4—First Aid Measures

Inhalation: Remove person to fresh air and assist breathing as needed. Call a doctor or poison control center for further treatment advice. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. Contains petroleum distillate – vomiting may cause aspiration pneumonia.

Ingestion: Seek medical attention or call a poison control center immediately. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a doctor or poison control center.

Eyes: Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. If present, remove contact lenses after first 5 minutes, then continue rinsing eye. Seek medical attention if eye irritation persists.

Skin: Remove contaminated clothing and wash before re-using. Flush skin with water for 15 – 20 minutes. Call a doctor or poison control center for further treatment advice.

After first aid, get appropriate in-plant, paramedic, or community medical support.
Section 5—Fire and Explosion Hazard Data

Extinguishing Media: Use dry chemical, foam or CO2 extinguishing media. If water is used must dike and contain run-off.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and full bunker gear. Smoke and fumes from fire may contain hazardous components. Evacuate non-essential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated.

Hazardous Combustion Products: Toxic gases may be formed in a fire situation. Carbon monoxide and other asphyxiates may form as well.

Unusual Fire and Explosion Hazards: Closed containers may explode from vapor expansion in high heat. Contain run-off by diking to prevent contamination of water supplies.

Section 6—Accidental Release Measures

Small Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Spills should be cleaned up immediately to prevent spreading.

Large Spills: Clean-up personnel should protect against mist inhalation and skin contact. Avoid generating mists. Spills should be cleaned up immediately to prevent spreading.

Containment: Do not release into sewers or waterways. Dike spills to prevent contamination to water supplies. Contain spills and absorb liquids by covering with clay or other absorbent material. Vacuum, scoop, or sweep up waste and place in a container for disposal.

Section 7—Precautions for Safe Handling and Use

Precautions to Be Taken in Handling and Storage: Store in cool, dry areas away from children, feed and food products and sources of heat. Do not store food, beverages, or tobacco products in the same storage area. Immediately clean up spills that occur during handling or storage. Protect from freezing. Keep containers closed when not in use. Wash thoroughly with soap and water after handling.

Other Precautions: Consult Federal, state and local regulations pertaining to storage and disposal.

Section 8—Control Measures/Personal Protection

Exposure Limits: Naphthalene (CAS # 91-20-3) 10 ppm OSHA TWA; Lambda-Cyhalothrin (CAS # 91465-08-6) 0.04 mg/m3 TWA (skin) – Syngenta Occupational Exposure Limit; Propylene glycol (CAS # 57-55-6) 10 mg/m3 American Industrial Hygiene Association TWA; Petroleum solvent 100 mg/m3 (15-17 ppm) TWA – recommended by manufacturer

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a properly FIT TESTED MSHA/NIOSH-approved respirator with an organic vapor (OV) cartridge or canister with any R, P, or HE filter.

Ventilation: Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred.

NOTE TO END USERS: Follow instructions for Personal Protective Equipment (PPE) as found on the pesticide container label.

Protective Gloves: Wear chemically protective gloves (such as barrier laminate, nitrile rubber, neoprene rubber or Viton).

Eye Protection: Wear chemical splash goggles. Contact lenses are not eye protective devices.

Other Protective Clothing or Equipment: Wear chemically protective boots, socks and coveralls to prevent prolonged or repeated skin contact.

Work/Hygienic Practices: Never eat, drink, nor smoke in work areas. Practice good hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9—Physical/Chemical Characteristics

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vapor Pressure (mm Hg):</td>
<td>Not Available</td>
</tr>
<tr>
<td>Vapor Density (Air=1):</td>
<td>Not Available</td>
</tr>
<tr>
<td>Solubility in Water (wt %):</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Appearance and odor:</td>
<td>Blue opaque liquid (capsule suspension); odor not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specific Gravity (H2O=1):</th>
<th>1.0682 g/ml @ 68°F (20°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freezing Point:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Boiling Point:</td>
<td>Not Available</td>
</tr>
<tr>
<td>pH:</td>
<td>5</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>&gt;200º F</td>
</tr>
</tbody>
</table>
Section 10—Reactivity Data
Stability: Product stable at room temperature in closed containers under normal storage and handling conditions.
Chemical Incompatibilities: None known
Conditions to Avoid: None known
Hazardous Decomposition Products: None known
Hazardous Polymerization: Will not occur.

Section 11—Toxicological Information
Eye Effects: Mildly irritating (rabbit)
Skin Effects: Slightly irritating (rabbit); LD50 >2000 mg/kg (rabbit); In humans, contact with exposed skin may result in temporary itching, tingling, burning or numbness, called paresthesia. The effect may result from splash, aerosol, or hot vapor contact, or transfer to the face from contaminated gloves and hands. The symptoms normally disappear within 24 hours. Face and genital areas are especially susceptible to this effect. Paresthesia involving the face is also known as “subjective facial sensation” or SFS.
Acute Inhalation Effects: LC50 > 2.5 mg/L air – 4 hours (rat)
Acute Oral Effects: LD50 = 351 mg/kg (rabbit)
Mutagenicity: Not determined
Teratogenicity: Not determined
Target Organs: Lambda-Cyhalothrin: Liver, nervous system
Naphthalene: Liver, kidney, respiratory tract, blood
Petroleum solvent: Respiratory tract, stomach, liver, thyroid, urinary bladder, CNS, skin
Propylene Glycol: CNS, kidney, liver
Carcinogenicity: NTP: Naphthalene - Anticipated Carcinogen
IARC: Group 2B - Naphthalene
OSHA: Not Available

Section 12—Ecological Information
Ecotoxicity Effects
Lambda-Cyhalothrin:
Fish (Rainbow Trout) 96-hour LC50 0.19 ppb
Bird (Mallard Duck) LD50 Oral >3950 mg/kg
Invertebrate (Water Flea) 48-hour EC50 0.04 ppb
Environmental Fate
Lambda-Cyhalothrin:
Not persistent in soil or water. Immobile in soil. Sinks in water (after 24 hours).

Section 13—Disposal Considerations
Waste: Dispose of in accordance with applicable Federal, state and local laws and regulations.
Container: Do not reuse the empty containers. Dispose of in accordance with applicable Federal, state and local laws and regulations. For full container disposal information, consult the product label.
RCRA characteristics: It is the responsibility of the individual disposing of this product to determine the RCRA classification and hazard status of the waste.

Section 14—Transport Information
Ground Transportation: UN 3352, Pyrethroid Pesticides, Liquid, Toxic, (contains Lambda-Cyhalothrin), 6.1, PG III
### Section 15—Regulatory Information

<table>
<thead>
<tr>
<th>TSCA Inventory:</th>
<th>This product is exempt from TSCA inventory requirements as it is solely for FIFRA regulated use.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Title III, Section 302:</td>
<td>Not determined</td>
</tr>
<tr>
<td>SARA Title III, Section 311/312:</td>
<td>Immediate: Yes</td>
</tr>
<tr>
<td>Sudden Release of Pressure:</td>
<td>No</td>
</tr>
<tr>
<td>SARA Title III, Section 313:</td>
<td>Napthalene &lt; 1.5% (CAS # 91-20-3)</td>
</tr>
<tr>
<td>CERCLA:</td>
<td>Report product spills greater than 800 gallons (based on naphthalene [RQ = 100 lbs.] content in the formulation)</td>
</tr>
<tr>
<td>PROPOSITION 65: WARNING:</td>
<td>This product may contain chemicals known to the State of California to cause cancer and birth defects or reproductive harm.</td>
</tr>
</tbody>
</table>

### Section 16—Other

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