1. Product and Company Identification

Use: crop protection product, insecticide

Company
BASF CORPORATION
100 Campus Drive
Florham Park, NJ 07932, USA

Registrant:
Whitmire Micro-Gen Research Laboratories, Inc.
3568 Tree Court Industrial Blvd.
St. Louis, MO 63122

<table>
<thead>
<tr>
<th>Substance number:</th>
<th>00000463659</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synonyms:</td>
<td>Pyriproxyfen + Prallethrin + Dinotefuran</td>
</tr>
</tbody>
</table>

2. Hazards Identification

Emergency overview

CAUTION:
KEEP OUT OF REACH OF CHILDREN.
Contains petroleum distillates.
Avoid contact with the skin, eyes and clothing.
Wash thoroughly after handling.
Aerosol container contains flammable gas under pressure.

See Product Label for additional precautionary statements.

State of matter: liquid
Colour: whitish
Odour: solvent-like

Potential health effects

Primary routes of exposure:
Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Acute toxicity:

Irritation / corrosion:
May cause slight irritation to the skin. May cause moderate but temporary irritation to the eyes.

Sensitization:
Skin sensitizing effects were not observed in animal studies.

### 3. Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Content (W/W)</th>
<th>Chemical name</th>
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<tbody>
<tr>
<td>165252-70-0</td>
<td>0.25 %</td>
<td>Dinotefuran</td>
</tr>
<tr>
<td>95737-68-1</td>
<td>0.1 %</td>
<td>Pyriproxyfen</td>
</tr>
<tr>
<td>23031-36-9</td>
<td>0.05 %</td>
<td>Prallethrin</td>
</tr>
<tr>
<td>64742-47-8</td>
<td>&lt;= 10.0 %</td>
<td>Distillates (petroleum), hydrotreated light</td>
</tr>
<tr>
<td>68476-40-4</td>
<td>&lt;= 15.0 %</td>
<td>Liquified petroleum gas propellant</td>
</tr>
<tr>
<td></td>
<td>&lt;= 75.0 %</td>
<td>Proprietary ingredients</td>
</tr>
</tbody>
</table>

### 4. First-Aid Measures

**General advice:**
First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or physician for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**If inhaled:**
Remove the affected individual into fresh air and keep the person calm.

**If on skin:**
Rinse skin immediately with plenty of water for 15 - 20 minutes.

**If in eyes:**
Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

**If swallowed:**
Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Do not induce vomiting. Have person sip a glass of water if able to swallow.

**Note to physician**
Treatment: Aspiration of this product during induced emesis can result in lung injury. If evacuation of stomach contents is considered necessary, use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation.

### 5. Fire-Fighting Measures

**Flash point:**
Non-flammable. Flame Projection: < 18°

**Autoignition:**
Based on the water content the product does not ignite.

**Self-ignition temperature:**
not self-igniting

**Suitable extinguishing media:**
foam, dry powder, carbon dioxide, water spray

**Hazards during fire-fighting:**
carbon monoxide, carbon dioxide, nitrogen oxides, toxic gases/vapours
The substances/groups of substances mentioned can be released in case of fire.
6. Accidental release measures

**Personal precautions:**
Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions.
Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

**Environmental precautions:**
Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

**Cleanup:**
Dike spillage. Pick up with suitable absorbent material. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

7. Handling and Storage

**Handling**

**General advice:**
RECOMMENDATIONS ARE FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS. PESTICIDE APPLICATORS & WORKERS must refer to the Product Label and Directions for Use attached to the product. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away from sources of ignition - No smoking. Keep container tightly sealed. Protect against heat. Handle and open container with care. Do not open until ready to use. Once container is opened, content should be used as soon as possible. Provide means for controlling leaks and spills. Follow label warnings even after container is emptied. The substance/ product may be handled only by appropriately trained personnel. Avoid all direct contact with the substance/product. Avoid contact with the skin, eyes and clothing. Avoid inhalation of dusts/mists/vapours. Wear suitable personal protective clothing and equipment.

**Protection against fire and explosion:**
Aerosol container contains flammable gas under pressure. The relevant fire protection measures should be noted. Fire extinguishers should be kept handy. Avoid all sources of ignition: heat, sparks, open flame. Avoid extreme heat. Ground all transfer equipment properly to prevent electrostatic discharge. Electrostatic discharge may cause ignition.

**Storage**

**General advice:**
Protect containers from physical damage. Store in a cool, dry, well-ventilated area. Avoid all sources of ignition: heat, sparks, open flame. Store protected against freezing.

**Storage incompatibility:**
General advice: Segregate from foods and animal feeds.

**Storage stability:**
May be kept indefinitely if stored properly. If an expiry date is mentioned on the packaging/label this takes priority over the statements on storage duration in this safety data sheet.

**Temperature tolerance**
Protect from temperatures above: 130 °F
Explosive at or above indicated temperature.
8. Exposure Controls and Personal Protection

Users of a pesticidal product should refer to the product label for personal protective equipment requirements.

**Components with workplace control parameters**

| Distillates (petroleum), hydrotreated light | ACGIH TWA value | 200 mg/m3 | Non-aerosol (total hydrocarbon vapor); Application restricted to conditions in which there are negligible aerosol exposures. |

Skin Designation: Non-aerosol (total hydrocarbon vapor);
The substance can be absorbed through the skin.

**Personal protective equipment**

**RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:**

**Respiratory protection:**
Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

**Hand protection:**
Chemical resistant protective gloves. Protective glove selection must be based on the user's assessment of the workplace hazards.

**Eye protection:**
Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

**Body protection:**
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

**General safety and hygiene measures:**
RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS
Wear long sleeved work shirt and long work pants in addition to other stated personal protective equipment. Work place should be equipped with a shower and an eye wash. Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Remove contaminated clothing immediately and dispose of safely.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Form</td>
<td>aerosol, liquid</td>
</tr>
<tr>
<td>Odour</td>
<td>solvent-like</td>
</tr>
<tr>
<td>Colour</td>
<td>whitish</td>
</tr>
<tr>
<td>pH value</td>
<td>6.1</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>80 psia</td>
</tr>
<tr>
<td>Density</td>
<td>0.9683 g/cm³</td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

**Conditions to avoid:**

**Substances to avoid:**
No substances known that should be avoided.

**Hazardous reactions:**
The product is chemically stable.

**Decomposition products:**
No hazardous decomposition products if stored and handled as prescribed/indicated., Prolonged thermal loading can result in products of degradation being given off.

**Thermal decomposition:**
Possible thermal decomposition products:
carbon monoxide, carbon dioxide, nitrogen dioxide, nitrogen oxide
Stable at ambient temperature. If product is heated above decomposition temperature toxic vapours may be released. To avoid thermal decomposition, do not overheat.

**Corrosion to metals:**
Corrosive effects to metal are not anticipated.

**Oxidizing properties:**
not fire-propagating

11. Toxicological information

**Acute toxicity**

**Oral:**
Type of value: LD50
Species: rat (female)
Value:  > 5,000 mg/kg
No mortality was observed.

**Inhalation:**
Type of value: LC50
Species: rat (male/female)
Value:  > 2.08 mg/l
Exposure time: 4 h
No mortality was observed.

**Dermal:**
Type of value: LD50
Species: rat (male/female)
Value:  > 5,000 mg/kg
No mortality was observed.

**Irritation / corrosion**

**Skin:**
Species: rabbit
Result: moderately irritating

**Eye:**
Species: rabbit
Result: Slightly irritating.
Sensitization:
Buehler test
Species: guinea pig
Result: Skin sensitizing effects were not observed in animal studies.

Repeated dose toxicity

Information on: Prallethrin
Assessment of repeated dose toxicity:
May affect the central nervous system as indicated in animal studies.

Genetic toxicity

Information on: Pyriproxyfen
No mutagenic effects reported.

Information on: Prallethrin
Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic.

Carcinogenicity

Information on: Pyriproxyfen
In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

Information on: Dinotefuran
No data available concerning carcinogenic effects.

Information on: Prallethrin
Not carcinogenic.

Reproductive toxicity

Information on: Pyriproxyfen
No reproductive toxic effects reported.

Information on: Dinotefuran
No data available concerning reproduction toxicity.

Information on: Prallethrin
Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

Development:

Information on: Pyriproxyfen
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

Information on: Dinotefuran
No data available concerning teratogenic effects.

Information on: Prallethrin
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological Information

Fish

Information on: Pyriproxyfen

Acute:
Flow through:
Oncorhynchus mykiss/LC50 (96 h): > 0.325 mg/l
Information on: Prallethrin
Acute:
Oncorhynchus mykiss/LC50 (96 h): 0.012 mg/l

Information on: Dinotefuran
Acute:
Oncorhynchus mykiss/LC50 (96 h): >100 ppm

Aquatic invertebrates

Information on: Pyriproxyfen
Acute:
Daphnia magna/LC50 (48 h): 0.4 mg/l

Information on: Prallethrin
Acute:
daphnia/EC50 (48 h): 0.0062 mg/l

Information on: Dinotefuran
Acute:
Daphnia magna/EC50 (48 h): >1000 ppm

Aquatic plants

Information on: Pyriproxyfen
Toxicity to aquatic plants:
OECD Guideline 201 green algae/EC50: 0.064 mg/l

Information on: Dinotefuran
Toxicity to aquatic plants:
green algae/EC50 (72 h): > 100 mg/l
swollen duckweed/EC50: >110 ppm

13. Disposal considerations

Waste disposal of substance:
Pesticide wastes are regulated. Improper disposal of excess pesticide, spray mix or rinsate is a violation of federal law. If pesticide wastes cannot be disposed of according to label instructions, contact the State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container disposal:
Do not cut, puncture, crush, or incinerate empty aerosol containers. Consult state or local disposal authorities for approved alternative procedures such as container recycling. Empty aerosol cans may meet the definition of RCRA D003. Consult local and/or regional EPA for further guidance.

14. Transport Information

Reference Bill of Lading

15. Regulatory Information
Federal Regulations

Registration status:
- Chemical: TSCA, US blocked / not listed
- Crop Protection: TSCA, US released / exempt

OSHA hazard category: Chronic target organ effects reported; ACGIH TLV established

EPCRA 311/312 (Hazard categories): Acute; Chronic

State regulations

<table>
<thead>
<tr>
<th>State RTK</th>
<th>CAS Number</th>
<th>Chemical name</th>
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</thead>
<tbody>
<tr>
<td>MA, NJ, PA</td>
<td>64742-47-8</td>
<td>Distillates (petroleum), hydrotreated light</td>
</tr>
</tbody>
</table>

16. Other Information

Refer to product label for EPA registration number.

Recommended use: insecticide

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

MSDS Prepared by:
BASF NA Product Regulations
msds@basf.com
MSDS Prepared on: 2011/03/25

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