Material Safety Data Sheet
DRIONE® INSECTICIDE POWDER

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: DRIONE® INSECTICIDE POWDER
MSDS Number: 102000002537
PCP Registration No.: 15255

Bayer CropScience Inc
#100 - 3131 - 114th Avenue SE
Calgary, AB T2Z 3X2
Canada

For MEDICAL, TRANSPORTATION or other EMERGENCY call: 1-800-334-7577 (24 hours/day)
For Product Information call: 1-888-283-6847

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins including cinerins</td>
<td>8003-34-7</td>
<td>1.00</td>
</tr>
<tr>
<td>Piperonyl butoxide</td>
<td>51-03-6</td>
<td>10.00</td>
</tr>
<tr>
<td>Silica, amorphous</td>
<td>7631-86-9</td>
<td>40.00</td>
</tr>
<tr>
<td>Distillates (petroleum), hydrotreated light</td>
<td>64742-47-8</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 3. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview
Caution! Harmful if swallowed or absorbed through skin. Moderate eye irritation.
Avoid contact with skin, eyes and clothing. Avoid breathing dust.

Physical State
powder

Odor
very faint

Appearance
white to light yellow

Routes of Exposure
Eye contact, Skin Absorption, Ingestion, Inhalation

Immediate Effects
Eye
Moderate eye irritation. Avoid contact with eyes.

Skin
Harmful if absorbed through skin. May cause slight irritation. Avoid contact with skin and clothing.

Ingestion
Harmful if swallowed. Do not take internally. Ingestion of large amounts may be harmful (see Signs and Symptoms).

Inhalation
Avoid breathing dust.
Material Safety Data Sheet

DRIONE® INSECTICIDE POWDER

Chronic or Delayed Long-Term
This product or its components may have target organ effects. This product or its components may have long term (chronic) health effects. This product contains ingredients that are considered to be probable or suspected human carcinogens (see Section 11 - Chronic).

Potential Environmental Effect
Toxic to fish.

SECTION 4. FIRST AID MEASURES

General
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye
Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Skin
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation
Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.

Notes to Physician
Signs and Symptoms
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Ingestion of larger amounts may have impact on the central nervous system (e.g. dizziness, headache).

Hazards
Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.

Treatment
There is no specific antidote. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

SECTION 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media
Carbon dioxide (CO2), Dry chemical, Foam, Water
Material Safety Data Sheet

DRIONE® INSECTICIDE POWDER

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
- Remove all sources of ignition. Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for Cleaning Up
- Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional Advice
- Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling Procedures
- Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Storing Procedures
- Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygiene Procedures
- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

- Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
- Eye wash facility and safety shower should be available. Follow all label instructions. Train employees in safe use of the product.

- Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash
Material Safety Data Sheet
DRIONE® INSECTICIDE POWDER

PPE separately from other laundry.

Eye/Face Protection  Tightly fitting safety goggles
Hand Protection  Chemical resistant nitrile rubber gloves
Body Protection  Wear long-sleeved shirt and long pants and shoes plus socks.
Respiratory Protection  When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Exposure Limits

<table>
<thead>
<tr>
<th>Compound</th>
<th>CAS Number</th>
<th>OEL (QUE)</th>
<th>TWA</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrethrins including cinerins</td>
<td>8003-34-7</td>
<td>CAD AB OEL</td>
<td>TWA</td>
<td>5 mg/m3</td>
</tr>
<tr>
<td></td>
<td>CAD BC OEL</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAD CN OEL</td>
<td>TWA</td>
<td>5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>Piperonyl butoxide</td>
<td>51-03-6</td>
<td>OES BCS</td>
<td>TWA</td>
<td>500 ppm</td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>White to light yellow</td>
</tr>
<tr>
<td>Physical State</td>
<td>Powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Very faint</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Density (Alr = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Bulk Density</td>
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</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Insoluble</td>
</tr>
</tbody>
</table>
Material Safety Data Sheet
DRIONE® INSECTICIDE POWDER

Minimum Ignition Energy  no data available
Partition coefficient: n-octanol/water  no data available

SECTION 10. STABILITY AND REACTIVITY

Conditions to Avoid  Exposure to moisture.
Hazardous Reactions  No hazardous reactions when stored and handled according to prescribed instructions. Stable under normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on this product as formulated. The non-acute information pertains to the technical-grade active ingredients, pyrethrin and piperonyl butoxide.

Acute Oral Toxicity  rat: LD50: > 5,000 mg/kg
Acute Dermal Toxicity  rabbit: LD50: > 2,000 mg/kg
Acute Inhalation Toxicity  rat: LC50: > 5.4 mg/l
  Exposure time: 4 h
  Determined in the form of dust.
  rabbit: LC50: > 20 mg/l
  Exposure time: 1 h
  Determined in the form of dust.
  Extrapolated from the 4 hr LC50.

Skin Irritation  rabbit: Slight irritation.
Eye Irritation  rabbit: Mild eye irritation.
Sensitization  guinea pig: Non-sensitizing.
Chronic Toxicity  Pyrethrin caused effects in the liver, lung, thyroid and/or nervous system in chronic studies in mice, rats and dogs.

  Piperonyl butoxide caused decreased body weights and/or increased organ weights (liver, kidney, adrenal) in chronic studies in rats and dogs.

Assessment Carcinogenicity
Pyrethrin is classified by EPA as "Suggestive Evidence of Carcinogenicity, but Not Sufficient to Assess Human Carcinogenic Potential" based on the occurrence of benign liver tumors only in female rats.
Therefore, an assessment of cancer risk to humans from potential exposure to pyrethrins is not required.
Piperonyl butoxide gave no evidence of a carcinogenic potential in a lifetime feeding study in rats. In an oncogenicity study in mice, piperonyl butoxide caused an increased incidence of liver tumors. The US EPA has categorized piperonyl butoxide as a group C carcinogen, possible human carcinogen, based on limited evidence of cancer in laboratory animals.

ACGIH
Pyrethrinics including cinerins 8003-34-7 Group A4
NTP
None.
IARC
Piperonyl butoxide 51-03-6 Overall evaluation: 3
Silica, amorphous 7631-86-9 Overall evaluation: 3
OSHA
None.

Reproductive & Developmental Toxicity

REPRODUCTION:
Pyrethrin was not a reproductive toxicant in a multi-generation rat study.

Piperonyl butoxide was not a reproductive toxicant in a two-generation study in rats.

DEVELOPMENTAL TOXICITY:
Pyrethrin was not a developmental toxicant in rats and rabbits.

Piperonyl butoxide did not cause developmental, embryotoxic or teratogenic effects in developmental toxicity studies in rats and rabbits.

Neurotoxicity

Pyrethrin caused neurobehavioral effects (e.g., tremors) in rats following acute and repeated oral exposure.

Piperonyl butoxide did not demonstrate the potential to cause neurotoxicity in standard toxicity studies submitted to the Agency. EPA has concluded that there is not a concern for neurotoxicity resulting from exposure to piperonyl butoxide.

Mutagenicity

Pyrethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Piperonyl butoxide does not have significant potential for mutagenicity based on sufficient evidence.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions
Do not allow to get into surface water, drains and ground water. Do not apply when weather conditions favor runoff or drift. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Apply this product as specified on the label.
SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance
Do not contaminate water, food, or feed by disposal. Follow container label instructions for disposal of wastes generated during use in compliance with the product label. Never place unused product down any indoor or outdoor drain.

Container Disposal
Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke.

SECTION 14. TRANSPORT INFORMATION

TDG (Canada):
Not regulated for road or rail.

SECTION 15. REGULATORY INFORMATION

PCP Registration No. 15255

US Federal Regulations
TSCA list
- Piperonyl butoxide 51-03-6
- Silica, amorphous 7631-86-9
- Distillates (petroleum), hydrotreated light 64742-47-8

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.

SARA Title III - Section 302 - Notification and Information
None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting
Piperonyl butoxide 51-03-6 1.0%

US States Regulatory Reporting
CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product does not contain any substances known to the State of California to cause reproductive harm.

US State Right-To-Know Ingredients
- Pyrethrins including cinerins 8003-34-7 CA, CT, IL, MN, PA, RI
- Piperonyl butoxide 51-03-6 NJ
- Silica, amorphous 7631-86-9 CA, MN

Canadian Regulations
Canadian Domestic Substance List
- Pyrethrins including cinerins 8003-34-7
- Piperonyl butoxide 51-03-6
Material Safety Data Sheet
DRIONE® INSECTICIDE POWDER

Silica, amorphe 7631-86-9
Distillates (petroleum), hydrotreated light 64742-47-8

Environmental
CERCLA
Pyrethrins including cinerins 8003-34-7
Clean Water Section 307 Priority Pollutants
None.
Safe Drinking Water Act Maximum Contaminant Levels
None.

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):
Health - 1  Flammability - 2  Reactivity - 0  Others - none
0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason to Revise: Updated due to new system and numbering scheme. Updated for general editorial purposes.

Prepared by the HSE Department of Bayer CropScience Inc. (306)-721-0310.

Revision Date: 02/08/2008

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