



DRIONE[®] INSECTICIDE POWDER

MSDS Version 1.

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name DRIONE[®] INSECTICIDE POWDER
Chemical Name Mixture; a.i.'s, pyrethrins, piperonyl butoxide
Synonym
MSDS Number 1909
Chemical Family
Chemical Formulation
EPA Registration No. 432-992
Canadian Registrat. No. 15255

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

Emergency Number (24 Hours/Day): 1-800-334-7577 Product Information: 1-888-283-6847

Product Use Description Drione Insecticide is a dust that provides quick control of a variety of insects and kills up to 6 months if left undisturbed. For industrial/commercial use only.

SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS No.</u>	<u>Concentration % by Weight</u>	
		<u>Minimum</u>	<u>Maximum</u>
Pyrethrin	8003-34-7	1.0000	
Piperonyl butoxide	51-03-6	10.0000	
Amorphous silicon dioxide hydrate (Amorphous silica)	112926-00-8	40.0000	
Other ingredients, including:			
Isoparaffinic Petroleum Solvent	64742-47-8	49.0000	

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SECTION 3. HAZARDS IDENTIFICATION

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

<u>Emergency Overview</u>	Causes moderate eye irritation. This product is toxic to fish.
Physical State	solid
Odor	Very mild, tea-like odor.
Appearance	white to yellow
Immediate Effects	
Eye	Causes moderate eye irritation.
Skin	Harmful if absorbed through skin.
Medical Conditions Aggravated by Exposure	None known
Signs and Symptoms	May cause gastrointestinal effects such as nausea, vomiting and diarrhea. Ingestion of large quantities can result in nervous system effects such as dizziness, loss of coordination, tremors and loss of consciousness. Symptoms usually regress with no long lasting effects.

SECTION 4. FIRST AID MEASURES

Eye	Flush eyes with plenty of water. Call a physician if irritation persists.
Skin	Wash with plenty of soap and water. Seek medical attention.
Ingestion	Drink 1 or 2 glasses of water. Call a physician or Poison Control Center immediately.
Inhalation	Remove victim to fresh air. Seek medical attention if breathing difficulties occur.
Note to Physician	May pose an aspiration pneumonia hazard.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	88 °C / 190 °F Test Type: Tag closed cup
Suitable Extinguishing Media	carbon dioxide (CO ₂), dry chemical, foam, water
Fire Fighting Instructions	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Keep upwind.

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Isolate hazard area. Avoid inhalation of smoke and fumes. Use water or foam to reduce fumes. Do not touch spilled material. If possible, move containers from area. Extinguish only if flow can be stopped. Use flooding amounts of water as a fog. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors.

FLAMMABILITY CLASSIFICATION/RATING:

NFPA/OSHA Class: IIIA

NFPA Rating (Fire): 2

Dust Explosion Class Not available

SECTION 6. ACCIDENTAL RELEASE MEASURES

General and Disposal Use proper protective equipment to minimize personal exposure (see Section 8). Take all necessary action to prevent and to remedy the effects of the spill. Ensure that the disposal is in compliance with Federal or local disposal regulations. See Section 13 for any applicable Reportable Quantity (RQ) and other federal regulatory information.

Land Spill or Leaks Small Spill: Sweep up carefully while avoiding the formation of a dust cloud. Place in an approved chemical waste container for disposal. Rinse spill area with small amount of soapy water. Contain and absorb the rinsate with inert absorbents and place into the same disposal container. Area can be washed with water to remove the last trace residue. Do not allow water to contaminate water supplies or sewers.

Large Spill: Eliminate all ignition sources. Stop leak if you can do so without coming into contact with spilled material. All equipment used to clean up spill should be grounded. Prevent entry into waterways, sewers, basements or confined areas. Inform appropriate authorities immediately if contamination occurs. Contact Bayer for further assistance if necessary.

SECTION 7. HANDLING AND STORAGE

Handling Procedures Avoid contact with skin, eyes and clothing. Containers larger than one pound may not be used in food handling establishments.

Storing Procedures Do not contaminate water, food, or feed by storage or handling. Store upright at room temperature. Avoid moisture. Containers larger than one pound may not be stored in food handling establishments. Containers one pound and smaller should be stored in original sealed container in a cool, dry place inaccessible to children and pets.

Work/Hygienic Procedures Wash thoroughly with soap and water after handling.

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SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls	Control airborne concentrations below the exposure guidelines. Local exhaust ventilation may be necessary.
Eye/Face Protection	safety glasses splash goggles or face-shield
Body Protection	Chemical-resistant gloves (Neoprene, Nitrile, PVC) other protective clothing to avoid skin contact
Respiratory Protection	Ensure adequate ventilation. If not adequate, use a chemical cartridge-type respirator approved by the National Institute of Occupational Health and Safety.
General Protection	Eye wash facility and safety shower should be available.

Exposure Limits

Pyrethrin	8003-34-7	OEL (QUE)	TWA	5 mg/m3
		CAD AB OEL	TWA	5 mg/m3
		CAD AB OEL	STEL	10 mg/m3
		CAD BC	TWA	5 mg/m3
		OEL		
		CAD BC	STEL	10 mg/m3
		OEL		
		CAD ON	TWA	5 mg/m3
		OEL		
		OEL		
Amorphous silicon dioxide hydrate (Amorphous silica)	112926-00-8	CAD BC	TWA	1.5 mg/m3
		OEL		
		Form of Exposure	Respirable dust.	
		CAD BC	TWA	4 mg/m3
		OEL		
		Form of Exposure	Total dust.	
		CAD BC	TWA	4 mg/m3
		OEL		
		Form of Exposure	Total dust.	
		CAD BC	TWA	1.5 mg/m3
		OEL		
		Form of Exposure	Respirable dust.	
		CAD AB OEL	TWA	2 mg/m3
		Form of Exposure	Respirable dust.	
		CAD AB OEL	TWA	5 mg/m3
		Form of Exposure	Total dust.	
CAD AB OEL	TWA	10 mg/m3		
Form of Exposure	Total dust.			
CAD AB OEL	TWA	5 mg/m3		
Form of Exposure	Respirable dust.			

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		OEL (QUE)	TWA		10 mg/m3
		Form of Exposure		Total dust.	
		CAD ON	TWA		10 mg/m3
		OEL			
Isoparaffinic Petroleum Solvent	64742-47-8	CAD ON	TWA		525 mg/m3
		OEL			

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to yellow
Physical State	solid
Odor	Very mild, tea-like odor.
pH	6 - 8 Normally not mixed with water neutral
Vapor Pressure	Not available
Vapor Density (air = 1)	Not available
Density	Not available
Bulk Density	(SETTLED): 12.2 lb/ft3 (FLUFFED): 9.2 lb/ft3
Boiling Point	Not available
Melting/Freezing Point	Not available
Solubility (in water)	insoluble
Solubility (in Solvent/Oil)	Not available
Minimum Ignition Energy (mj)	Not available
Minimum Explosion Conc. (MEC)	Not available

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Other Information EVAPORATION RATE (BUTYL ACETATE = 1): Not available
 LIMITED OXYGEN CONCENTRATION (LOC): Not available
 PARTICLE SIZE: 3 microns

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability Stable

Hazardous Polymerization Will not occur
(Conditions to avoid)

SECTION 11. TOXICOLOGICAL INFORMATION

Acute Oral Toxicity The following data was developed with: Drione Insecticide
 Rat: LD50: > 5,000 mg/kg
 Practically non-toxic.

Acute Dermal Toxicity The following data was developed with: Drione Insecticide
 Rabbit: LD50: > 2,000 mg/kg
 Slightly toxic.

Acute Inhalation Toxicity The following data was developed with: Drione Insecticide
 Rat: LC50: 2.99 mg/l 4 h
 Practically non-toxic.

Skin Irritation The following data was developed with: Drione Insecticide
 Non-irritating.
 Primary Irr. Index = 0.1

Eye Irritation The following data was developed with: Drione Insecticide
 Rabbit: Slightly irritating.

Sensitization The following data was developed with: Drione Insecticide
 Guinea pig: Non-sensitizing

NOTE: The severity classifications listed above are those of Bayer and, particularly for eye irritation, may not always coincide with EPA-Mandated Precautionary Statements.

THE FOLLOWING DATA WERE DEVELOPED WITH: pyrethrin and piperonyl butoxide, the active ingredients

Chronic Toxicity In a recent study, marginally higher incidences of benign thyroid, parathyroid, ovary, and liver tumors were observed in rats and in lungs of mice following lifetime high doses exposures to pyrethrum.

Marginally higher incidences of benign liver tumors in mice were observed in mice following lifetime high dose exposures to piperonyl butoxide.

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The significance of these observations is questionable and under review. The doses at which tumors were observed for both pyrethrum and piperonyl butoxide greatly exceeded potential human exposure from labeled uses.

Assessment Carcinogenicity

ACGIH

None

NTP

None

IARC

Piperonyl butoxide

51-03-6

3

OSHA

None

Reproductive & Developmental Toxicity

There were no birth defects or adverse effects on reproductive parameters in tests with rats or rabbits for either pyrethrum or piperonyl butoxide. They are not considered to be teratogenic.

Mutagenicity

Pyrethrum was not found to be genotoxic and did not damage DNA in any study conducted (Ames mutagenicity assay, chromosome aberration in Chinese hamster ovaries (CHO) cells, and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells.

PBO was not genotoxic in several tests including the Ames mutagenicity assay, chromosome aberration in Chinese hamster ovary (CHO) cells, CHO/HGPRT assay with S9 activation, and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells.

SECTION 12. ECOLOGICAL INFORMATION

Environmental Precautions

This product is toxic to fish. Do not apply directly to water. Do not contaminate water when disposing of equipment washwater or rinsate.

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SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance

Do not contaminate water, food, or feed by disposal.

Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions may be disposed of at an approved waste disposal facility.

Container Disposal

Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

Container One Pound and Smaller: Do not reuse containers. Wrap container in several layers of newspaper and discard in trash.

RCRA Classification

Not Regulated under this Statute

SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: Not DOT Regulated

ADDITIONAL SHIPPING PAPER DESCRIPTION

Pyrethrins have a Reportable Quantity of 1 pound. When sold in 40 pound boxes, Drione has a pyrethrin content of 0.4 pound which if spilled does not require reporting, therefore it is not DOT regulated at less than 100 pounds.

If Drione is sold in quantities of 100 pounds or more, then the correct DOT information is:

Environmentally hazardous substance, Solid, n.o.s. (Pyrethrins)

UN 3077, PG III, Class 9

Hazard Label: Class 9

RQ (Pyrethrins)

NOTE: For transport purposes (49 CFR Part 173.132), the calculated 1-Hour LC50 (Rat) is: > 11.96 mg/l.

SECTION 15. REGULATORY INFORMATION

US Federal

EPA Registration No. 432-992

TSCA list

Piperonyl butoxide 51-03-6

Isoparaffinic Petroleum Solvent 64742-47-8

TSCA 12b export notification

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None

SARA Title III - section 302 - notification and information

None

SARA Title III - section 313 - toxic chemical release reporting

None

US States Regulatory

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

None

Canadian Regulations

Canadian Registrat. No.

15255

Canadian Domestic Substance List

Pyrethrin

8003-34-7

Piperonyl butoxide

51-03-6

Amorphous silicon dioxide hydrate
(Amorphous silica)

112926-00-8

Isoparaffinic Petroleum Solvent

64742-47-8

Environmental

CERCLA

None

Clean Water Section 307 Priority Pollutants

None

Safe Drinking Water Act Maximum Contaminant Levels

None

International Regulations

EU Classification

None

European Inventory of Existing Commercial Substances (EINECS)

Pyrethrin

8003-34-7

Piperonyl butoxide

51-03-6

Isoparaffinic Petroleum Solvent

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SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	1	2	0	E
NFPA	1	2	0	

REVISED SECTIONS:

MSDS REVISION INDICATOR:Company name change.

Print Date: 01.04.2003

Supersedes MSDS, which is older than: 01.04.2003

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