



DRIONE® INSECTICIDE

MSDS Version 3.3

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name	DRIONE® INSECTICIDE
Chemical Name	Mixture; a.i.'s, pyrethrins, piperonyl butoxide
Common Name	
MSDS Number	62
Chemical Family	
Chemical Formulation	
EPA Registration No.	432-992

Bayer CropScience
 2 T.W. Alexander Drive
 Research Triangle PK, NC 27709
 USA

For MEDICAL, TRANSPORTATION or Other EMERGENCY call 1-800-334-7577 24 hours/day
 For Product Information call 1-866-99BAYER (1-866-992-2937)

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>Hazardous 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		
Distillates, petroleum, hydrotreated light	64742-47-8		

SECTION 3. HAZARDS IDENTIFICATION

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

Emergency Overview Causes moderate eye irritation. This product is toxic to fish.

Odor Very mild, tea-like odor.

Immediate Effects

Eye Causes moderate eye irritation.

Skin Harmful if absorbed through skin.

Medical Conditions None known.

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Aggravated by Exposure

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.

SECTION 5. FIRE FIGHTING MEASURES

Flash Point	88 °C / 190 °F Test Type: Tag closed cup
Suitable Extinguishing Media	Carbon dioxide (CO2), Dry chemical, Foam, Water
Fire Fighting Instructions	<p>As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Keep upwind. Isolate hazard area. Avoid inhalation of smoke and fumes. Use water or foam to reduce fumes. Do not touch spilled material. Extinguish only if flow can be stopped. Use flooding amounts of water as a fog. Avoid breathing vapors. Cool containers with water from the farthest possible distance away. Move containers from fire area if without risk.</p> <p>FLAMMABILITY CLASSIFICATION/RATING: NFPA/OSHA Class: IIIA NFPA Rating (Fire): 2</p>
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. See Section 13 for any applicable Reportable Quantity (RQ) and other federal regulatory information. Any disposal practice must be in compliance with all Federal, State/provincial, and local laws and regulations.
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 residue with inert absorbents and place into the same disposal container. Area can be washed

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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.

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	Other protective clothing to avoid skin contact. Chemical-resistant gloves made of waterproof material such as neoprene, butyl rubber, barrier laminate or nitrile rubber.
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	ACGIH	TWA	5 mg/m3
		NIOSH	REL	5 mg/m3
		OSHA Z1	PEL	5 mg/m3
		OSHA Z1A	TWA	5 mg/m3
		US CA OEL	TWA PEL	5 mg/m3

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Amorphous silicon dioxide hydrate (Amorphous silica)	112926-00-8	OSHA Z1A	TWA	6 mg/m3
		US CA OEL	TWA PEL	5 mg/m3
		Form of Exposure	Respirable fraction.	
		US CA OEL	TWA PEL	5 mg/m3
		Form of Exposure	Respirable fraction.	
		US CA OEL	TWA PEL	10 mg/m3
		Form of Exposure	Total dust.	
		US CA OEL	TWA PEL	5 mg/m3
		Form of Exposure	Respirable fraction.	
		US CA OEL	TWA PEL	10 mg/m3
		Form of Exposure	Total dust.	
		US CA OEL	TWA PEL	10 mg/m3
		Form of Exposure	Total dust.	
Distillates, petroleum, hydrotreated light	64742-47-8	ACGIH	TWA	10 mg/m3
		ACGIH NIC	TWA	200 mg/m3

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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
Other Information	EVAPORATION RATE (BUTYL ACETATE = 1): Not available

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LIMITED OXYGEN CONCENTRATION (LOC): Not available

PARTICLE SIZE: 3 microns

SECTION 10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Hazardous Polymerization (Conditions to avoid)	Will not occur

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute Oral Toxicity Rat: LD50: > 5,000 mg/kg

Acute Dermal Toxicity Rabbit: LD50: > 2,000 mg/kg

Acute Inhalation Toxicity Rat: LC50: 2.99 mg/l 4 h

Skin Irritation Non-irritating.
Primary Irr. Index = 0.1

Eye Irritation Rabbit: Slightly irritating.

Sensitization Guinea pig: Non-sensitizing

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.

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

Pyrethrin

8003-34-7

Group A4

NTP

None

IARC

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Piperonyl butoxide
OSHA
None

51-03-6

3

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 surface or ground water by cleaning equipment or disposal of wastes, including equipment washwater.

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 empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. 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

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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

EPA Registration No. 432-992

US Federal Regulations

TSCA list

Piperonyl butoxide	51-03-6
Distillates, petroleum, hydrotreated light	64742-47-8

TSCA 12b export notification

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%
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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

Pyrethrin	8003-34-7	CA, CT, IL, MN, NJ, PA, RI
Piperonyl butoxide	51-03-6	NJ

Canadian Regulations

Canadian Domestic Substance List

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Environmental

CERCLA

Pyrethrin	8003-34-7	1 lbs
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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
Distillates, petroleum, hydrotreated light	64742-47-8

SECTION 16. OTHER INFORMATION

NFPA	Health	Flammability	Reactivity	Others
	1	2	0	

REVISED SECTIONS:

Section 2 - Removed minimum conc.% value for CAS No. 112926-00-8 and removed maximum conc.% value for CAS No. 64742-47-8.

Approval Date: 03/19/2004

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