

# Material Safety Data Sheet

## PREVICUR FLEX FUNGICIDE

MSDS Number: 1495  
MSDS Version 2.0

### SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name** PREVICUR FLEX FUNGICIDE  
**Chemical Name** Propyl-3 {3-dimethylamino}propyl}-carbamate monohydrochloride  
**Synonym**  
**MSDS Number** 1495  
**Chemical Family**  
**Chemical Formulation** C9H21N2O2CL  
**EPA Registration No.** 264-678  
**Canadian Registrat. No.**

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

For Product Use Information: 1-866-99BAYER (1-866-992-2937) Monday through Friday  
8:00AM-4:30PM  
For Medical Emergency contact DART: (800) 334-7577 24 Hours/Day  
For Transportation Emergency CHEMTREC: (800) 424-9300 24 Hours/Day

**Product Use Description** A fungicide for the protection of potatoes from Late Blight and Tuber Blight.

### 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>
Propamocarb hydrochloride	25606-41-1	66.5000	
Inert ingredients		33.5000	

INERT INGREDIENTS (33.5%): None of the inert ingredients are regulated hazardous chemicals (OSHA, ACGIH, or EPA) and therefore are not listed above.

### SECTION 3. HAZARDS IDENTIFICATION

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

**Emergency Overview** CAUTION. MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH THE SKIN. A MODERATE SKIN IRRITANT AND A SLIGHT EYE IRRITANT. PRODUCT IS A STRAW-COLORED LIQUID WITH A FAINT AROMATIC ODOR.

**Physical State** liquid

**Odor** Faint; aromatic

**Appearance** Straw-colored

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<b>Routes of Exposure</b>	Skin contact, mist inhalation
<b>Immediate Effects</b>	
<b>Eye</b>	May cause slight eye irritation.
<b>Skin</b>	May be harmful if absorbed through the skin. A slight to moderate skin irritant. Not likely to cause skin sensitization.
<b>Ingestion</b>	May be harmful if swallowed. Effects are probably slight and non-specific if minute amount was accidentally ingested.
<b>Inhalation</b>	May be harmful if inhaled. Effects are probably slight and non-specific for inhalation incidental to routine handling and use.
<b>Chronic or Delayed Long-Term</b>	None of the product ingredients are listed as carcinogenic by NTP, IARC, or OSHA.
<b>Medical Conditions Aggravated by Exposure</b>	None specific
<b>Signs and Symptoms</b>	Ingestion of high doses of propamocarb hydrochloride may cause lethargy, convulsions and collapse.

### SECTION 4. FIRST AID MEASURES

<b>Eye</b>	Immediately flush eyes with plenty of water. Get medical attention if irritation persists.
<b>Skin</b>	Wash with soap and water.
<b>Ingestion</b>	Seek medical attention immediately. See "Note to Physician" below.
<b>Inhalation</b>	Remove person to fresh air. Support respiration if necessary. Seek medical advice.
<b>Note to Physician</b>	Do not administer atropine unless cholinesterase inhibition is measured or patient shows distinct symptoms thereof. Oxime therapy is contraindicated. Otherwise, administration of gastric lavage or induction of vomiting followed by application of activated charcoal is the recommended treatment.

### SECTION 5. FIRE FIGHTING MEASURES

<b>Flash Point</b>	Does not flash
<b>Fire and Explosion Hazards</b>	When exposed to extremely high temperatures, such as in a warehouse fire, propamocarb hydrochloride may decompose and give off toxic fumes which include nitrogen oxides.
<b>Suitable Extinguishing Media</b>	Foam, carbon dioxide, dry powder, sand, earth, or water spray.
<b>Fire Fighting Instructions</b>	Wear positive pressure self-contained breathing apparatus.

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

- General and Disposal** Use proper protective equipment to minimize exposure (see Section 8). Take all necessary action to prevent and to remedy the adverse effect of the spill. Ensure the disposal is in compliance with federal requirements and state or local regulations.
- Land Spill or Leaks** Carefully sweep up while avoiding the formation of a dust cloud. Place in suitable container and seal for disposal. Area can be washed with water to remove last traces of material, by keeping out of watercourses or sewers. Inform authorities immediately if contamination occurs.

### SECTION 7. HANDLING AND STORAGE

- Handling Procedures** CAUTION. May be harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes or clothing.
- Storing Procedures** Store in the original container and keep tightly closed. Store in a cool, dry place. Do not contaminate water, food or feed by storage or handling.
- Work/Hygienic Procedures** USERS SHOULD:
- (1) Wash before eating, drinking, chewing gum, using tobacco, or using the toilet.
  - (2) Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water.
  - (3) Keep and wash PPE separately from other laundry.
  - (4) Do not apply this product in a way that will contact workers or other persons, either directly or through drift.
  - (5) Only protected handlers may be in the area during application.
  - (6) For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.
  - (7) Do not apply this product through any type of irrigation system.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering Controls** Maintain good ventilation in handling area to minimize exposure. Local exhaust ventilation may be necessary if used in a confined area.
- Eye/Face Protection** Safety glasses; chemical goggles
- Body Protection** Rubber (synthetic or natural) gloves
- Respiratory Protection** Ensure good ventilation. If not adequate, use a suitable respirator for added protection.

#### FOR APPLICATORS AND HANDLERS (AGRICULTURAL USES):

The personal protective equipment (PPE) for agricultural uses are specified under the Subtitle: "Note to Applicators and Handlers of Agricultural Products."

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### NOTE TO APPLICATORS AND HANDLERS OF AGRICULTURAL PRODUCTS:

For agricultural products which are within the scope of the EPA Worker Protection Standards (WPS) (40 CFR Part 170) all users must refer to the statement below or the Product Label for WPS-specified Personal Protective Equipment (PPE), Restricted Entry Interval (REI), and other Precautionary Statements.

### PERSONAL PROTECTIVE EQUIPMENT FOR APPLICATORS AND HANDLERS:

Applicators and other handlers must wear:

Long-sleeved shirts and long pants

Waterproof gloves

Shoes plus socks

### PERSONAL PROTECTIVE EQUIPMENT REQUIRED FOR EARLY ENTRY INTO TREATED AREAS:

For entry into treated area during the restricted entry interval (REI) of 12 hours that involves contact with anything that has been treated such as plants, soil, or water, the PPE required is:

Coveralls

Waterproof gloves

Shoes plus socks

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements listed under the heading NON-AGRICULTURAL USE REQUIREMENTS apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter areas until spray deposit has completely dried.

### FOR MANUFACTURING AND PACKAGING EMPLOYEES:

The personal protective equipment (PPE) in accordance with OSHA standards are recommended immediately above.

**Exposure Limits**                      None Established

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Straw-colored
<b>Physical State</b>	liquid
<b>Odor</b>	Faint; aromatic
<b>pH</b>	Not available
<b>Vapor Pressure</b>	Propamocarb HCL Technical 6 X 10 <sup>(-6)</sup> Torr (*) at 25 °C
<b>Specific Gravity</b>	1.085(water=1)
<b>Density</b>	1.085 g/ml
<b>Boiling Point</b>	100 °C
<b>Solubility (in water)</b>	500 g/l(50.0%)

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Octanol/Water Partition Coefficient      Not available

### SECTION 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Hazardous Products of Decomposition</b>	When heated to the point of decomposition, propamocarb hydrochloride may give off toxic fumes of oxides of carbon and nitrogens.
<b>Hazardous Polymerization (Conditions to avoid)</b>	Will not occur

### SECTION 11. TOXICOLOGICAL INFORMATION

**Acute Oral Toxicity**      Rat: LD50: 2,000 - 8,550 mg/kg  
Low toxicity

**Acute Dermal Toxicity**      Rat: LD50: > 3,920 mg/kg  
Low toxicity

Rabbit: LD50: > 3,920 mg/kg  
Low toxicity

**Acute Inhalation Toxicity**      Rat: LC50: > 6.2 mg/l 4 h  
Low toxicity

The highest attainable aerosol concentration in the air. No toxicity or mortality was observed in rats exposed to this maximum dose.

**Skin Irritation**      A slight to moderate skin irritant.

**Eye Irritation**      May cause slight irritation to eyes.

#### ANTICHOLINESTERASE ACTIVITY:

Propamocarb hydrochloride was not an inhibitor of blood or brain cholinesterase on repeated oral administration to rats or dogs. With rat or dog plasma in vitro, it was weakly inhibitory at levels equivalent to 2,200 mg/kg.

**Sub-Chronic Toxicity**      Results from 90-day animal studies suggest no target organ effects under the conditions of normal handling and use.

**Chronic Toxicity**      In two-year feeding studies with propamocarb hydrochloride, no adverse effects were seen in mice, rats and dogs receiving, respectively, up to 500 ppm, 1000 ppm and 3000 ppm of propamocarb in their diet. At 10,000 ppm a species-specific oculotoxic effects was seen in dogs.

#### Assessment Carcinogenicity

**ACGIH**

None

**NTP**

None

**IARC**

None

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**OSHA**  
None

**Reproductive & Developmental Toxicity**

Propamocarb hydrochloride showed no adverse effects on reproductive function or capacity in a three-generation rat reproductions study at a dietary level of 1000 ppm.

**Teratogenicity**

Propamocarb hydrochloride was not teratogenic in rats or rabbits at maternally toxic dose levels. The no-effect level (NOEL) in rats and rabbits was 235 mg/kg/day and 164 mg/kg/day, respectively.

**Mutagenicity**

Propamocarb hydrochloride was not mutagenic or genotoxic when tested in the Ames gene mutation assay and in six other mutagenesis systems.

### SECTION 12. ECOLOGICAL INFORMATION

**Environmental Precautions**

USE PRECAUTIONS: DO NOT graze or feed clippings from treated areas to livestock.

**Ecological Information**

Propamocarb hydrochloride, the active ingredient of this product, is of low toxicity to birds, fish and bees. For terrestrial uses, do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

### SECTION 13. DISPOSAL CONSIDERATIONS

**General Disposal Guidance**

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**Container Disposal**

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Handling and disposal of pesticide wastes, including spills or rinsates, must be in accordance with federal requirements under the Resource Conservation and Recovery Act (RCRA). Also must ensure that the waste disposal is in compliance with state and local regulations which may be more restrictive or otherwise different from the RCRA requirements.

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

RCRA CLASSIFICATION:  
Hazardous Waste Ingredients: None

### SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME: None

DOT SHIPPING LABEL: None

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### SECTION 15. REGULATORY INFORMATION

#### US Federal

EPA Registration No. 264-678

#### TSCA list

None

#### TSCA 12b export notification

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 contains a chemical known to the state of California to cause cancer.

None

This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.

None

##### US State right-to-know ingredients

None

#### Canadian Regulations

##### Canadian Registrat. No.

##### Canadian Domestic Substance List

None

#### 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)

Propamocarb hydrochloride 25606-41-1

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### SECTION 16. OTHER INFORMATION

	Health	Flammability	Reactivity	Others
HMIS	1	1	0	E
NFPA	1	1	0	None

#### REVISED SECTIONS:

MSDS REVISION INDICATOR: Updated Ariel Data, Revisions to Section 8, 11 and 15.

PREPARED BY : Dept. of Regulatory Affairs  
PHONE: 800-438-5837

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