



# Kryocide®

## Insecticide

### ACTIVE INGREDIENT:

Cryolite: sodium aluminofluoride (Fluorine—not less than 50%) ..... 96.0%

OTHER INGREDIENTS: ..... 4.0%

TOTAL ..... 100.0%

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

**HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN OR INHALED. CAUSES MODERATE EYE IRRITATION.**

#### FIRST AID

<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

EPA Registration No. 70506-172

EPA Establishment No. 33770-JPN-01

Batch/Lot # \_\_\_\_\_

**Net Weight 50 lbs. (22.68 kg)**

**United Phosphorus, Inc.**

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## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

### CAUTION

HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN, OR INHALED. CAUSES MODERATE EYE IRRITATION. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist.

#### Personal Protective Equipment:

Some materials that are chemical-resistant to this product are butyl rubber, nitrile rubber or neoprene. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Long sleeved shirt and long pants
- Chemical resistant gloves
- Shoes plus socks

#### User Safety Recommendations:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### ENVIRONMENTAL HAZARDS

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 washwater or rinsate.

#### GENERAL INFORMATION

KRYOCIDE is a fine powder suitable for spray or dust application by ground equipment or air. A thorough application should be made, covering the underside of the leaves, if possible, as well as the top surfaces. Some processors may have additional use restrictions. Check with your processor. This product is compatible with Integrated Pest Management (IPM) Programs.

KRYOCIDE is recommended for control of the insects on the crops listed. KRYOCIDE may be used in combination with other commonly used pesticides and approved adjuvants. Thorough coverage of all foliage with Kryocide is necessary for best efficacy. It is highly recommended that every row be treated.

**NOTE:** Do not use KRYOCIDE in combination with lime or compounds containing free lime.

Remove visible residues on edible portions of fruit and vegetables by washing, brushing, field trimming, or other effective means.

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Apply only when wind speed is 10 mph or less at the application site.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over long-sleeved shirt and long pants
- Chemical resistant gloves
- Socks and chemical resistant footwear

#### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in the original container in a dry area. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling sweep up spillage and dispose of in accordance with the Pesticide Disposal instructions listed below.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Nonrefillable container. Do not reuse or refill this container.

Completely empty bag into application equipment. Then offer for recycling if available or dispose of empty bag in a sanitary landfill or by incineration or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

#### DIRECTIONS FOR USE ON VEGETABLE AND FRUIT CROPS

**When used as a spray:** Apply in a minimum of 5 gallons of water by air and in a minimum of 10 gallons of water by ground or in sufficient spray volume to obtain thorough coverage.

**When used as a dust:** May be applied alone, with dusting sulfur, or other dust products. When applied in combination with sulfur or other dusting products, the label directions, and restrictions appearing on the other products labels must be adhered to such that the most restrictive of label limitations and restrictions is followed.

**When used as a spray or dust:** Apply when insects are small (early instar). Use the higher rates for severe insect infestations.

#### Spray Drift Labeling

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the airstream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the information covered in the following [Aerial Drift Reduction Advisory Information](#).

## Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

## Controlling Droplet Size

**Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure:** Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles:** Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation:** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

**Nozzle Type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

## Boom Length

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

## Application Height

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

## Swath Adjustment

When applications are made with a cross-wind, the swath will be displaced downward. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

## Wind

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

## Temperature and Humidity

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

## Temperature Inversions

Applications should not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

## Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from sensitive areas).

CROP	INSECTS	SPRAY or DUST RATE LBS/A	REMARKS
Broccoli, Cauliflower, Brussels sprouts, Kohlrabi	Cabbage Looper Corn Earworm Cutworms Diabrotica Beetles Diamondback Moth Caterpillar Flea Beetles Imported Cabbageworm Yellowstriped Armyworm	8-16	Apply as needed with a minimum of 7 days between applications. Do not exceed 96 lbs. per acre per season. Do not apply within 7 days of harvest.
Cabbage	Cabbage Looper Cutworms Corn Earworm Diabrotica Beetles Diamondback Moth Caterpillar Flea Beetles Imported Cabbageworm Yellowstriped Armyworm	8-16	Apply as needed with a minimum of 7 days between applications. Do not exceed 96 lbs. per acre per season. Do not apply within 14 days of harvest.
Cucumber	Cabbage Looper Cucumber Beetles Diabrotica Beetles Flea Beetles Melonworm Pickleworm	8-12	Apply as needed with a minimum of 10 days between applications. Do not exceed 48 lbs. per acre per season. Do not apply within 14 days of harvest.
Winter Squash, Melons, Pumpkins	Cabbage Looper Cucumber Beetles Diabrotica Beetles Flea Beetles Melonworm Pickleworm	8-16	Apply as needed with a minimum of 7 days between applications. Do not exceed 64 lbs. per acre per season. Do not apply within 14 days of harvest.
Summer Squash	Cabbage Looper Cucumber Beetles Diabrotica Beetles Flea Beetles Melonworm Pickleworm	8-16	Apply as needed with a minimum 7 days between applications. Do not exceed 64 lbs. per acre per season. Do not apply within 7 days of harvest.
Collards	Cabbage Looper Corn Earworm Cutworms Diabrotica Beetles Diamondback Moth Caterpillar Flea Beetles Imported Cabbageworm Yellowstriped Armyworm	8-16	Apply as needed with a minimum of 10 days between applications. Do not exceed 96 lbs. per acre per season. Do not apply within 14 days of harvest.
Citrus	Blue Green Citrus Root Weevil* Citrus Cutworm Fruitree Leafroller Fuller Rose Beetle Garden Tortrix Halcocera Katydid Orange Tortrix Orangedog Variegated Cutworm	8-30	Apply as needed with a minimum of 30 days between applications. Do not exceed 90 lbs. per acre per season. Do not apply within 15 days of harvest.
Grapes	Climbing Cutworms Flea Beetles	4-10	Apply as needed with a minimum of 14 days between applications. When needed to control later broods, make additional applications after the fruit is 1/4" or larger in diameter. Do not apply more than 20 lbs. per acre for preharvest use per crop year. Do not apply within 30 days of harvest. For application to grapes grown for table use after the fruit is 1/4" or larger in diameter, use of concentrate sprays will reduce visible spots which may result from the use of dilute applications at that stage. If used on wine grapes or grapes that may be sold to a winery for export, please observe their restrictions on post-bloom applications of KRYOCIDE.
	Omnivorous Leafroller Yellowstriped Armyworm	6-10	
	Grape Berry Moth* Grape Leafroller Orange Tortrix Western Grapeleaf Skeletonizer	5-8	
Grapevines (after harvest)	Cutworms Grape Berry Moth* Grape Leafroller Omnivorous Leafroller Orange Tortrix Western Grapeleaf Skeletonizer	5-8	For control of leaf feeding insects after all harvestable fruit or raisins have been removed from the vineyard. Apply before leaf drop while insects are actively feeding. Do not exceed 8 lbs. per acre per season for post harvest use.
Kiwi FOR USE IN CALIFORNIA ONLY	Omnivorous Leafroller	10	Apply with ground equipment only. When used as a spray, use sufficient water to obtain thorough coverage, up to 200 gallons spray per acre. Apply as needed with a minimum of 15 days between applications. Do not exceed 40 lbs. per acre per season. Do not apply within 30 days of harvest.
Lettuce (leaf and head varieties)	Armyworm Cabbage Looper Corn Earworm Tobacco Budworm	8-20	Apply as needed with a minimum of 7 days between applications. Do not exceed 160 lbs. per acre per season. Do not apply within 14 days of harvest.
Peppers	Armyworm Cabbage Looper Hornworms Omnivorous Leafroller Pepper Weevil	8-12	Apply as needed with a minimum of 7 days between applications. Do not exceed 24 lbs. per acre per crop. Do not apply within 14 days of harvest.
Potatoes	Colorado Potato Beetle Potato Tuberworm	10-12	For spray applications: Apply by air in 5-15 gallons of water per acre or by ground in 15-100 gallons of water. Apply with a minimum of 7 days between applications. Do not apply more than 96 lbs. per acre per season. Application to exposed tubers may result in excess residues.
Tomatoes Eggplant	Armyworm Blister Beetles Cabbage Looper Colorado Potato Beetle Larvae* Flea Beetles Fruitworms Hornworms Tomato Pinworm	8-16	Apply as needed with a minimum of 7 days between applications. Do not exceed 64 lbs. per acre per season. Do not apply within 14 days of harvest.

\* Not registered for this use in California.

## DIRECTIONS FOR USE ON ORNAMENTALS

CROP	INSECTS	SPRAY or DUST RATE LBS/A	REMARKS
Ornamentals, Shade Trees	Caterpillars Codling Moth Flea Beetles Fuller Rose Beetle Gypsy Moth Katydid Leafrollers Plum Curculio	8-24	For spray applications: Apply in a minimum of 5 gallons of water by air and in a minimum of 10 gallons of water by ground. Use sufficient water volume to obtain thorough coverage of the plants. For spray or dust applications: Use the higher rate for severe insect infestations.

## DIRECTIONS FOR USE THROUGH CHEMIGATION SYSTEMS

### NOT FOR THIS USE IN CALIFORNIA

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### GENERAL INSTRUCTIONS

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Do not connect chemigation system to any public water system. Public water system means a system for the provision of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

### SYSTEM REQUIREMENTS

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

## APPLICATION INSTRUCTIONS

Observe the requirements in the System Requirements section above.

Apply KRYOCIDE only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shutoff.

Maintain a gentle continuous agitation in mix tank during mixing and application to assure a uniform suspension.

Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time.

Application of more than recommended quantities of irrigation water per acre may result in decreased product performance.

Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained. In a center pivot system, block the nozzle set nearest the well/pivot/injection unit to prevent spray being applied to this area.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.

### SPRAY PREPARATION

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water. Prepare a suspension of KRYOCIDE in a mix tank. Fill the tank with 1/2 or 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of KRYOCIDE and then the remaining volume of water.

### Sprinkler Irrigation – Notes

Observe all System Requirements and Application Instructions above.

Set sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of KRYOCIDE into the irrigation water line so as to deliver the desired rate per acre. The suspension of KRYOCIDE should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing. When treatment with KRYOCIDE has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

For overhead chemigation, apply only when wind speed is 10 mph or less.

Where sprinkler distributed patterns do not overlap sufficiently, unacceptable pest control may result.

Check local restrictions and requirements regarding sprinkler irrigation applications, as they may vary from state to state.

## EMERGENCY TELEPHONE NUMBERS:

CHEMTREC: (800) 424-9300

MEDICAL: (866) 673-6671 Rocky Mountain Poison Control Center

**IMPORTANT INFORMATION  
READ BEFORE USING PRODUCT**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

To the extent consistent with applicable law, United Phosphorus, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, Inc., and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, UNITED PHOSPHORUS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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