

Karma™ Fungicide

PROPAMOCARB HYDROCHLORIDE
GROUP 28 FUNGICIDE

For Control of Pythium and Phytophthora on Turf and Ornamentals

ACTIVE INGREDIENT:	% By Wt.
Propamocarb hydrochloride*	66.8%
OTHER INGREDIENTS:	33.2%
TOTAL:	100.0%

*Propyl (3-dimethylamino)propylcarbamate hydrochloride
Contains 6.0 lb. active ingredient per gallon.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

FIRST AID

If swallowed:	<ul style="list-style-type: none">• Call a poison control center or doctor for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
If on skin or clothing:	<ul style="list-style-type: none">• Take off contaminated clothing.• Rinse skin immediately with plenty of water for 15-20 minutes.• Call a poison control center or doctor for treatment advice.

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

EMERGENCY PHONE NUMBERS	(800) 222-1222 Poison Control Center (human health) (800) 424-9300 CHEMTREC (transportation and spills)
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NOTE TO PHYSICIAN: 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.

See additional Precautionary Statements and Directions For Use inside booklet.

NET CONTENTS: 1 Gallon

Manufactured for:
Advan LLC
2525 Meridian Parkway
Durham, NC 27713

1G

READ THE ENTIRE
LABEL CAREFULLY
BEFORE OPENING
THE CONTAINER.

EPA Reg. No. 83070-8
EPA Est. No. 60063-GA-001 (Lot No. begins with VL)
70815-GA-001 (Lot No. begins with CB)
EPA 20190920 (06/20)

PULL BACK LABEL HERE

FUNGICIDE

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Harmful if swallowed or absorbed through the skin. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material.
- Shoes plus socks
- A chemical-resistant apron, if dipping cuttings

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

USER SAFETY RECOMMENDATIONS

Users should:

- 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.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS

DO NOT apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

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 in your State responsible for pesticide regulation.

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 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 into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, including plants, soil or water is:

- Coveralls
- Chemical resistant gloves made of any waterproof material
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box 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, and greenhouses.

DO NOT enter or allow others to enter treated areas until spray deposit has dried completely.

USE RESTRICTIONS

- **DO NOT** graze or feed clippings from treated areas to livestock.
- **DO NOT** apply this product through any type of irrigation system.
- **TURF: Applications by air to turf are prohibited.**

PRODUCT INFORMATION

This product is a completely water miscible fungicide concentrate. It is intended for use on turfgrass, which is subject to Pythium Blight (Cottony Blight, Grease Spot). It may be used after germination to control Pythium damping-off in turf, or on established turf to prevent or control Pythium Blight. This product does not afford broad-spectrum disease control for *Rhizoctonia* spp. (Brown Patch), *Sclerotinia* spp. (Dollarspot), or *Helminthosporium* spp. (Leafspot). Use a broad-spectrum fungicide if these diseases coexist with Pythium Blight.

This product is also labeled for prevention of root rot and damping-off caused by *Pythium* spp. and *Phytophthora* spp. at all stages of ornamental propagation.

MANDATORY SPRAY DRIFT REQUIREMENTS

Ground Applications

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For all applications, applicators are required to use a medium or coarser spray droplet size (ASABE S572.1).
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

Boomless Ground Applications:

- Applicators are required to use a medium or coarser droplet size (ASABE S572.1) for all applications.
- **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site.
- **DO NOT** apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure – Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Bloomless Ground Applications: Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications: Take precautions to minimize spray drift.

RESISTANCE MANAGEMENT INFORMATION

For resistance management, this product contains a Group 28 fungicide. Any fungal population may contain individuals naturally resistant to this product and other Group 28 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

Tank mixing this product with a labeled rate of protectant fungicide that has a different mode of action is required. The tank mix partner must be labeled for downy mildew or late blight control. This ensures optimum performance and reduces the potential for resistance development.

To delay fungicide resistance, take one or more of the following steps:

- Rotate the use of this product or other Group 28 fungicides within a growing season sequence with different groups that control the same pathogens.
- Use tank mixtures with fungicide from a different group that are equally effective on the target pest when such use is permitted. Use at least the minimum application rate as labeled by the manufacturer.
- Adopt an integrated disease management program for fungicide use that includes scouting, uses historical information related to pesticide use, and crop rotation, and which considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- Where possible, make use of predictive disease models to effectively time fungicide applications. Note that using predictive models alone is not sufficient to manage resistance.
- Monitor treated fungal populations for resistance development.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information or to report suspected resistance, contact your pesticide distributor or university extension specialist to report resistance.

COMPATIBILITY: This product is compatible with iprodione, triadimefon, chlorothalonil, chlorpyrifos and thiram. For control of other soil-borne diseases including *Rhizoctonia* spp. or *Fusarium* spp., this product can be tank mixed with thiophanate-methyl. Use the full rate of each fungicide and follow all directions and restrictions appearing on the labels of these products. Follow most restrictive label requirements.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

DO NOT tank mix with any product that contains a prohibition on tank mixing.

CROP USE DIRECTIONS

TURFGRASS

RESTRICTIONS

- Only for use on golf courses and sod farms.
- **Aerial application is prohibited**, restrict applications to ground spray.
- **DO NOT** apply more than a TOTAL of 12 fl. oz. (equivalent to 0.57 lb. a.i.) of formulated product per 1000 sq. ft. per year (25 lbs. a.i./acre/year).

Apply this product up to 6 times for preventative applications OR up to 4 times for curative applications OR a combination of preventative and curative applications throughout the season not to exceed 12 fl. oz. (equivalent to 0.57 lb. a.i.) of this product per 1000 sq. ft. per year (25 lbs. a.i./acre/year).

CROP	APPLICATION RATE FLUID OUNCES PER 1000 SQ. FT. (LBS AI PER ACRE)	APPLICATION INSTRUCTIONS
TURFGRASS: For control of Pythium Blight, Pythium Damping-Off and Root Rot on Established Turf and Overseeded Areas	Preventive Treatment: 1.3 – 2 fl.oz. (0.062 – 0.095 lbs.ai) in 2 - 5 gallons of water	ESTABLISHED TURF*: Apply as a preventive treatment during periods of high temperature and humidity favorable to the development of Pythium Blight.
	Curative Treatment: 3 – 4 fl.oz. (0.14 – 0.19 lbs.ai) in 2 - 5 gallons of water	OVERSEEDED AREAS*: Apply after germination to control Pythium Damping-Off. RETREATMENT: Retreat at 7 – 21-day intervals if conditions remain favorable for disease development. Use the lower rate for the shorter interval and the higher rate for the longer interval within the application rate range. Under severe disease pressure conditions, use the highest labeled rate and shortest interval.

***NOT FOR USE ON SOD FARMS IN ARIZONA**

ORNAMENTALS

RESTRICTIONS

- Only for use on commercially grown ornamentals in greenhouses and container-grown ornamentals in nurseries.
- Drench applications must be limited to soil directed sprays.
- **DO NOT** make more than 2 applications/year for ornamentals.
- **DO NOT** apply more than 31.5 fl.oz. of formulated product (1.48 lb. a.i. propamocarb) per 1000 square feet per application.
- **DO NOT** apply more than 63.0 fl.oz. of formulated product (2.95 lb. a.i. propamocarb) per 1000 square feet per crop production cycle for greenhouses.
- **DO NOT** make foliar applications to ornamentals grown for cut flowers.

This product is labeled for prevention of root rot and damping-off at all stages of ornamental propagation. This product requires no agitation after initial mixing. Use this product within one week of mixing. This product does not cause phytotoxic symptoms on the listed plants when used as directed. Conduct trials on other ornamental species before extensive use.

CROP	APPLICATION RATE FLUID OUNCES PER 1000 SQ. FT. (LBS AI PER ACRE)	APPLICATION INSTRUCTIONS
ORNAMENTALS: For control of Pythium and Phytophthora on ornamental plants: African Violet, Ageratum, Alyssum, Aster, Azalea, Browallia, Carnation, Celosia, Chrysanthemum, Coleus, Dahlia, Dusty Miller, Easter Lily, Ferns, Geranium, Gloxinia, Impatiens, Lobelia, Marigold, Pansy, Petunia, Poinsettia, Portulaca, Salvia, Snapdragon, Verbena, Violet and Vinca	3 fl.oz. in 10 gallons of water	SEEDING: Apply to the seeding area using 3 quarts of solution per 10 sq. ft. Treat before sowing of seeds requiring light and after covering of seeds requiring dark for germination. DO NOT apply more than two applications of this product per container per year. If a second application is needed, the minimum retreatment interval is 7 days. TRANSPLANTING SEEDLINGS: Apply to the transplanting area using 3 quarts of solution per 10 sq. ft. before transplanting. Do not apply more than two applications of this product per container per year. If a second application is needed, retreat at a minimum interval of 7 days to 6 months depending on the plant species and cultural practices.
	2 fl.oz. per 10 gallons of water	TRANSPLANTING CUTTINGS: Drench cutting bed using 2 gallons of solution per 10 sq. ft. before setting. DO NOT apply more than two applications of this product per container per year. If two applications are being made, do not exceed 31.5 fluid ounces of this product per 1000 sq. ft. per application. If a second application is needed, retreat at a minimum interval of 7 days to 6 months depending on the plant species and cultural practices. POTTING: Dip bare root plants in the solution before potting. After potting, drench each pot at the rate of 3.5 fluid ounces of solution per 4-inch pot. DO NOT exceed 31.5 fluid ounces of this product per 1000 sq. ft. per application and do not apply more than two applications per container per year. If a second application is needed, retreat at a minimum interval of 7 days to 6 months depending on the plant species and cultural practices.

CROP	APPLICATION RATE FLUID OUNCES PER 1000 SQ. FT. (LBS AI PER ACRE)	APPLICATION INSTRUCTIONS
WOODY ORNAMENTALS: For control of Phytophthora spp. on species including Azalea, Abelia, Berberis, Buddleja, Buxus, Camellia, Chamaecyparis, Cotoneaster, Eunonymus, Ficus, Forsythia, Hibiscus, Hydrangea, Ilex, Juniperus, Ligustrum, Lonicera, Osmanthus, Philadelphus, Pyracantha, Rhododendron, Rosa, Spiraea, Thuja, Vibernum, Weigela and Yucca.	2.5 fl.oz. per 10 gallons of water	Drench each container at the rate of 5 quarts of solution per 10 sq. ft. of surface. DO NOT apply more than two applications of this product per container per year. If two applications are being made, do not exceed 31.5 fluid ounces of this product per 1000 sq. ft. per application. If a second application is needed, retreat at a minimum interval of 7 days to 6 months depending on the plant species and cultural practices.

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage and disposal.

STORAGE: Store in original container and keep tightly closed. Store in a cool, dry, secure place.

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

CONTAINER HANDLING:

[Containers < 5 Gallons:] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration.

[Minibulk Containers: [greater than 5 gal.]] Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follow: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

(continued)

STORAGE AND DISPOSAL *(continued)*

CONTAINER HANDLING: *(continued)*

[Bulk Containers: [greater than 5 gal.]] Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. When the container is empty, replace the cap and seal all openings that have been opened during use; and return to the point of purchase, or to a designated location named at the time of purchase of this product. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged or leaking, call CHEMTREC. If the container is damaged and leaking or material has been spilled, follow these procedures:

- Cover spill with absorbent material.
- Sweep into disposal container.
- Wash area with detergent and water and follow with clean water rinse.
- Do not allow to contaminate water supplies.
- Dispose of according to instructions.

If not returned to the point of purchase or to a designated location, clean empty container as instructed above and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

WARRANTY AND LIMITATION OF DAMAGES

CONDITIONS OF SALE: To the extent consistent with applicable law, Advan LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with the directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Advan LLC.

Advan LLC disclaims all other warranties, express or implied. To the extent consistent with applicable law, Advan LLC shall not be liable for consequential, special, or indirect damages resulting from the use or handling of this product, and Advan LLC's sole liability and buyer's and user's exclusive remedy shall be limited to the refund of the purchase price. Buyer and user acknowledge and assume all risks and liability resulting from handling, storage and use of this product. Advan LLC does not authorize any agent or representative to make any other warranty, guarantee or representation concerning this product.



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If swallowed:	<ul style="list-style-type: none">• Call a poison control center or doctor for treatment advice.• Have person sip a glass of water if able to swallow.• Do not induce vomiting unless told to do so by the poison control center or doctor.• Do not give anything by mouth to an unconscious person.
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