



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

July 5, 2016

Steven K. Ditto  
US Regulatory Affairs Manager  
McLaughlin Gormley King Company D/B/A MGK  
8810 10<sup>th</sup> Ave. N  
Minneapolis, MN 55427

Subject: Label Notification per PRN 2007-4 – Container disposal language  
Product Name: MGK PBO 8-E  
EPA Registration Number: 1021-1511  
Application Date: 6/16/2016  
Decision Number: 518598

Dear Mr. Ditto:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 2007-4 and finds that the action requested falls within the scope of PRN-2007-4.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on non-refillable containers. The code may appear either on the label (and can be added by non-notification via PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact Angela Hollis at 703-347-0216 or via email at [hollis.angela@epa.gov](mailto:hollis.angela@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "M. Fry".

Meridith M. Fry, Ph.D., Product Manager 4  
Invertebrate and Vertebrate Branch 1  
Registration Division (7505P)  
Office of Pesticide Programs

# MGK® PBO 8-E

[ABN: Exponent® Insecticide Synergist]

- [Graphic: MGK Logo] [MGK® Insect Control Solutions]
- For use as a synergist in a tank mix to aid in improving the control of insects
- Aids in inhibiting mixed function oxidative resistance in insects
- Raises level of control by increasing insect susceptibility to insecticides
- For use in livestock and poultry areas
- For use in Food Areas of Food Handling Establishments
- Can be tank mixed with Suspend® SC, Demand® CS, Talstar®, Temprid®, Tempo®, Cy-Kick® CS, Onslaught, Dragnet® and other pyrethroid insecticides
- Enhances efficacy of pyrethroid insecticides
- Enhances efficacy of Suspend® SC, Demand® CS, Talstar®, Temprid®, Tempo®, Cy-Kick® CS, Onslaught, Dragnet® and other pyrethroid insecticides
- Reduces insects ability to metabolize pyrethroid insecticides
- Reduces (Blocks) insects metabolic resistance process
- Enhances efficacy against MFO resistant insects
- Can be added to Outdoor Residential Misting Systems
- Makes insects more susceptible to insecticides
- Increases killing power by making insects more susceptible to insecticides
- Tank mix Partner
- Tank mix with pyrethroid insecticides for enhanced efficacy
- Labeled for mosquito misting systems

## NOTIFICATION

1021-1511

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

07/05/2016

### ACTIVE INGREDIENT:

\*Piperonyl butoxide ..... 91.30%

OTHER INGREDIENTS ..... 8.70%

100.00%

\*(butylcarbityl) (6-propylpiperonyl) ether and related compounds.

MGK®, Exponent® - Registered trademarks of McLaughlin Gormley King Company  
 Bravado® is a registered trademark of Bayer AG  
 Tame® is a registered trademark of Valent U.S.A. Corporation

## KEEP OUT OF REACH OF CHILDREN CAUTION PRECAUCIÓN

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
 (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
IF SWALLOWED:	<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 do so by a poison control center or a doctor.</li> <li>▪ Do not give anything by mouth to an unconscious person.</li> </ul>
IF IN EYES:	<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 eyes.</li> <li>▪ Call a poison control center or doctor for treatment advice.</li> </ul>
IF ON SKIN OR CLOTHING:	<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>
IF INHALED:	<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. For additional information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), you may call 1-888-740-8712.

Manufactured by  
  
 8810 Tenth Avenue North  
 Minneapolis, MN 55427

EPA Reg. No. 1021-1511

EPA Est. No. 1021-MN-2

Net Contents: \_\_\_\_\_

PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Causes moderate eye irritation. Wear goggles or face shields. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of barrier laminate, nitrile or neoprene rubber, or Viton. If you want more options, follow the instruction for category E on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators and other handlers must wear the following: long-sleeved shirt and long pants; chemical-resistant gloves such as Barrier Laminate, Neoprene Rubber, Nitrile Rubber, or Viton; and shoes and socks.

In addition to the above PPE, mixers and loaders supporting aerial applications to forests and/or applicators using a high-pressure hand wand in an enclosed area must wear at least a NIOSH-approved respirator with:

- a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C; or
- any N, R, P, or HE filter.

In addition to the above PPE, applicators using handheld foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with:

- a dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C); or
- a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G); or
- a cartridge or canister with any N, R, P or HE filter.

See engineering controls for additional requirements.

### USER SAFETY REQUIREMENTS

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.

Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

### ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands with plenty of soap and water before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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.

### ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product has the potential to contaminate water through runoff. This product has a potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

Do not apply directly to water, 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 or rinsate.

### PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

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

**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), 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 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.

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, such as soil or water, is:

- Coveralls, shoes plus socks, and
- Chemical-resistant gloves made of any waterproof material.

**STRUCTURAL 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, or greenhouses.

Do not enter or allow others to enter until sprays have dried.

Do not enter or allow others to enter until vapors, mists, and aerosols have dispersed, and the treated area has been thoroughly ventilated.

Except when applying directly on animals or animal premises, do not apply this product in a way that will contact workers or other persons either directly or through drift.

Except when applying directly on animal or animal premises, only protected handlers may be in the area during application.

This product is an emulsifiable concentrate for use in a tank mix with insecticides and acaricides to aid in improving the control of insects and mites. MGK® PBO 8-E is a synergist that aids in blocking oxidative resistance that may develop in insects and mites and has no insecticidal properties of its own.

**USE RESTRICTIONS**

- Do not apply this product in a way that will contact adults, children, or pets, either directly or indirectly through drift. Only protected handlers may be in the area during application.
- Do not wet plants to the point of runoff or drip.
- Do not apply directly to water, storm drains, or drainage ditches. To prevent product runoff, do not over water the treated area(s) or apply when heavy rain is expected. Rinse applicator over lawn or garden area only.
- Do not remain in treated area. Exit area immediately and remain outside the treated area until aerosols, vapors, and/or mists have dispersed.
- Always test final spray solution in an inconspicuous area prior to use as some fibers or surfaces may be adversely affected by an application of this, or any liquid product.
- Do not use in aircraft cabins except in compliance with PR Notice 96-3.
- In absence of specific data or experience on growing plants, trees and ornamentals (outdoors, in greenhouses or indoors), it is recommended that tank mixes with MGK® PBO 8-E be tested for any phytotoxicity on a representative sample of the growing plants prior to use.
- Do not tank mix MGK® PBO 8-E with any product having label prohibitions against such mixing.

**Application Types:**

MGK® PBO 8-E may be applied via ground application units, handheld sprayers, power sprayers, backpack sprayers, outdoor residential misting systems, foggers and ULV applicators, and chemigation.

Indoor and Outdoor Non-Crop Mixing Chart:

MGK® PBO 8-E can be tank mixed with any insecticide product unless prohibited by that insecticide's label.

THE PURPOSE OF THIS CHART IS SOLELY TO RECOMMEND THE RATE OF MGK® PBO 8-E PER GALLON OF WATER. PLEASE REFER TO CURRENT TANK MIX PARTNER LABEL TO DETERMINE THE RATE OF THAT SPECIFIC PRODUCT THAT IS APPROPRIATE FOR YOUR APPLICATION.

Application Type	Recommended MGK PBO 8-E Mix Rate per gallon	% Active	Maximum Single Application
Surface General and Crack & Crevice or Spot	Light Infestation	0.5 fl. oz.	0.35%
	↑ ↓	1.0 fl. oz.	0.71%
		1.5 fl. oz.	1.07%
		2.0 fl. oz.	1.43%
Heavy Infestation			
Space Spray	Light Infestation	0.25 fl. oz.	0.18%
	↑ ↓	0.50 fl. oz.	0.35%
		0.75 fl. oz.	0.53%
		1.00 fl. oz.	0.71%
Heavy Infestation			

**STRUCTURAL USE DIRECTIONS:**

**MGK® PBO 8-E STRUCTURAL USE RATES and RESTRICTIONS:**

After treatment, do not allow children and pets into treated areas until spray has dried.

When used as a space spray, do not exceed 0.4 fl. oz. of MGK® PBO 8-E per 1,000 cu. ft. of space treated.

When used as a crack and crevice, broadcast surface spray or spot treatment do not exceed 8.0 fl. oz. of MGK® PBO 8-E per 1,000 sq. ft. of space treated.

**WHEN TANK MIXING, ALWAYS FOLLOW THE MOST RESTRICTIVE LABELING OF ALL PRODUCTS IN THE MIXTURE.**

MGK® PBO 8-E MAY BE USED IN A TANK MIX WITH INSECTICIDES LABELED FOR USE IN THE FOLLOWING AREAS OR USE PATTERNS:

RESIDENTIAL DWELLING AND COMMERCIAL, INSTITUTIONAL INDOOR SITES: Sites such as Homes, Multiple Unit Housing, Hotels, Schools, Restaurants, Food Processing Facilities, Food Storage and Warehousing, Bakeries, Residential Facilities, Healthcare Facilities, Warehouses, Office Buildings, Factories, Home Exteriors, and Industrial Facilities.

Do not apply more than 1 time per day.

Do not make space spray application when facility is in operation.

Remove or cover exposed food and drinking water before application.

Remove or cover dishes, utensils, food processing equipment and food preparation surfaces, or wash them with a suitable detergent and rinse with potable water before use.

Direct application to food contact surfaces is prohibited.

Ventilate well prior to reentry or reoccupation.

Allow spray to dry prior to reentry.

NON-FOOD AREAS: MGK® PBO 8-E may be used to treat non-food areas. Non-food areas include garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets, and storage (after canning or bottling).

TREATMENTS IN FOOD HANDLING ESTABLISHMENTS (Places other than private residences in which food is held, processed, prepared or served):

FOOD AREAS: MGK® PBO 8-E can be used to treat food areas of food handling establishments, restaurants, or other areas where foods are commercially prepared or served.

FOOD STORED IN BAGS: MGK® PBO 8-E can be used as a space spray made to the surfaces of bags of stored food products. Do not exceed 0.4 fl. oz. MGK® PBO 8-E per 1,000 cubic ft. of space treated.

**OUTDOOR SITES:** Non-Agricultural rights of way, Commercial, Industrial and Institutional Premises and Outdoor Eating Establishments, including Parks, Landscape, Turf, Home Exteriors, Buildings, Industrial Facilities, Equipment.

When used as a broadcast surface spray, do not exceed 1.2 fl. oz. of MGK® PBO 8-E per 1,000 sq. ft. treated.

When used as a crack and crevice or spot surface treatment, do not exceed 8.0 fl. oz. of MGK® PBO 8-E per 1,000 sq. ft.

OUTDOOR ORNAMENTAL AND LAWNS: Sites such as Trees, Shrubs, Flowers, Foliage Plants, Lawns, Yards, Turf Grass, Golf Courses, Parks, Landscape.

When used as a broadcast surface application, do not exceed 0.32 fl. oz. of MGK® PBO 8-E per 1,000 sq. ft.

When used as a crack and crevice or spot surface treatment (including applications for fire ants or turf diagnostic aid), do not exceed 8.0 fl. oz. of MGK® PBO 8-E per 1,000 sq. ft.

**OUTDOOR AGRICULTURAL PREMISES:**

When used as a broadcast surface spray, do not exceed 0.32 fl. oz. of MGK® PBO 8-E per 1,000 sq. ft. treated.

For growing plants that will be consumed as food, do not exceed 0.384 fl. oz. (2.3 teaspoons) of MGK® PBO 8-E per 1,000 sq. ft. treated.

For crack and crevice, or spot surface sprays (including applications for fire ant applications or turf diagnostic aid), do not exceed 8.0 fl. oz. of MGK® PBO 8-E per 1,000 sq. ft. treated.

**PET PREMISE TREATMENT:**

May be used in a space spray application for pet premises. Do not exceed 0.5 fl. oz. of MGK® PBO 8-E per 1,000 cu. ft. treated.

For broadcast surface sprays, or crack and crevice or spot surface treatments, do not exceed 8.0 fl. oz. of MGK® PBO 8-E per 1,000 sq. ft. treated.

**DIRECT APPLICATION TO LIVESTOCK, DAIRY AND POULTRY ANIMALS:**

MGK® PBO 8-E may be tank mixed with insecticides labeled for application directly to Non-domestic animals (including lactating dairy animals, meat and poultry animals). Do not apply microencapsulated product to lactating or food animals.

**LIVESTOCK, DAIRY AND POULTRY PRODUCTION FACILITIES AND PREMISES:**

MGK® PBO 8-E may be tank mixed with insecticides labeled for use in and around Livestock, Dairy and Poultry Production Facilities, Indoor Agricultural Premises, Commercial Animal Housing and Equipment to improve control of flying and crawling insects.

When used in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from spray and from dead or falling insects.

Remove or cover milking utensils before application. Wash teats of animals before milking.

Do not apply when food, feed, and/or water is present.

**WHEN ANIMALS ARE NOT PRESENT:**

When used as a space spray, do not exceed 4.0 fl. oz. of MGK® PBO 8-E per 10,000 cu. ft. of space treated.

For surface applications, crack and crevice, or spot surface treatments, do not exceed 8.0 fl. oz. per 1,000 sq. ft.

**AS A SPACE SPRAY WHEN ANIMALS ARE PRESENT:**

May be used in a space spray when non-domestic animals are present. Do not exceed 1.28 fl. oz. of MGK® PBO 8-E per 1,000 cu. ft. of space treated per day.

When used in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from spray and from dead or falling insects. Remove or cover milking utensils before application. Wash teats of animals before milking.

**DIRECTIONS FOR USE IN OUTDOOR RESIDENTIAL MISTING SYSTEMS:**

NOTE: NOT REGISTERED for use in Automatic ULV Spraying Systems in the State of New York.

MGK® PBO 8-E may be mixed only with insecticides that contain either Pyrethrins or Permethrin that are registered for use in outdoor residential misting systems.

When using this product, installers and service technicians must comply with the license, certification, or registration requirement of the state(s), tribe(s), or local authority(ies) where they are installed.

If the system works on an automatic timer, set the timing for application when people, pets, and food are unlikely to be present.

If the system works when a person operates a remote activation device, then application of this pesticide when people, pets, and food are present is prohibited.

Do not use in an evaporative cooling system.

Direct the nozzles to spray toward the target area and away from swimming pools, water bodies, or eating and cooking areas.

Do not set nozzles to direct mist near outside air condition systems or other home air intakes.

If used in a system with a reservoir tank for the end use dilution, the system reservoir tank must be locked. Securely attach the end use pesticide label and a dilution statement to the system reservoir tank in a weather protected area or plastic sleeve. The dilution statement must be phrased as follows: this container holds \_\_\_ parts MGK® PBO 8-E to \_\_\_ parts water.

If used in a direct injection system, the pesticide container must be locked. Securely attach the end use label to the pesticide container in a weather protected area or plastic sleeve.

This product must only be used in systems that have been calibrated to apply no more than the maximum application rate of 0.00058 lbs. of piperonyl butoxide per 1,000 cubic feet per day or 0.00058 lbs. of piperonyl butoxide per nozzle when nozzles are spaced 10 ft. apart.

**RESIDENTIAL MISTING DILUTION RATES:**

CONTAINER SIZE	To achieve a dilution rate of 0.09 % use:	To achieve a dilution rate of 0.23% use:	To achieve a dilution rate of 0.55% use:
30 GALLONS	4 fl. oz.	10 fl. oz.	23 fl. oz.
55 GALLONS	7 fl. oz.	17.5 fl. oz.	42 fl. oz.
125 GALLONS	16 fl. oz.	40 fl. oz.	95.5 fl. oz.
225 GALLONS	28.5 fl. oz.	71.5 fl. oz.	172 fl. oz.

**For Use on Crops**

**When tank mixing, always follow the most restrictive labeling of ALL products in the mixture.**

MGK® PBO 8-E can be tank mixed with any insecticide product unless prohibited by that insecticide’s label.

MGK® PBO 8-E may be used in a tank mix with an insecticide or acaricide on GROWING CROPS (OUTDOORS AND IN GREENHOUSES), as well as in insecticide applications to Dormant Crops.

**SPRAY DRIFT MANAGEMENT FOR AGRICULTURE CROPS:**

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interactions 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.

Do not apply at wind speeds greater than 10 mph (16 km/h) at the application site. Do not make any type of application into temperature inversions. Apply as a medium or coarser spray (ASABE standard 572).

Additional requirements for aerial applications:

Do not release spray at a height greater than 10 feet above the ground or crop canopy.

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Aerial applicators must consider flight speed and nozzle orientation in determining droplet size. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

Additional requirements for ground applications:

During ground applications do not release spray at a height greater than 4 feet above the ground or crop canopy.

Additional requirements for airblast applications:

During airblast applications direct sprays into the canopy. Turn off outward pointing nozzles at row ends and when spraying outer rows.

**CROP USE RATES and RESTRICTIONS:**

<b>Food Crops grown outdoors or in greenhouses in agricultural settings</b>		
	Maximum Use Rate	Use Restrictions
Field and Orchard Crops	8.0 fl. oz. per acre or 0.20 fl. oz. per 1,000 sq. ft.	Do not apply more than 10 times per season. Do not reapply within 3 days except under extreme pest pressure. In case of extreme pest pressure, do not reapply within 24 hours. Do not apply to cotton within 14 days of seed harvest. A 10-day water hold is required for all pyrethrins applications when rice fields are flooded.
Hydroponically-grown crops	1.0 ppm a.i. in water	
Greenhouse Space Sprays	0.22 fl. oz. per 10,000 cubic feet	
Greenhouse Surface Sprays	0.20 fl. oz. per 1,000 sq. ft.	
<b>Greenhouse Grown Ornamental, Flowering and Foliage Plants</b>		
	Maximum Use Rate	Use Restrictions
Surface Applications	0.58 fl. oz. per 1,000 sq. ft. or 24.0 fl. oz. per acre	Do not apply more than 1 time per day.
Space Sprays	0.67 fl. oz. per 10,000 cubic feet	
Forestry	20 fl. oz. per acre	
Sod Farms	16 fl. oz. per acre	

Following the directions and using the required volume of water on the insecticide label, tank mix at a rate of 2 to 8 fluid ounces of MGK® PBO 8-E per acre. Eight (8) fluid ounces (1/2 pint) will provide 0.5 lb. of MGK® PBO 8-E active ingredient.

Prior to tank mix, a compatibility test should be done using the proper proportions of chemicals and water to ensure the physical compatibility of the mixture. The tank mix application must conform to accepted use precautions and directions for both products.

Mix MGK® PBO 8-E with an insecticide based on the amount of active ingredient. Most insecticides are synergized at the ratio range of 1 to 10 parts MGK® PBO 8-E’s active ingredient to 1 part of an insecticide’s active ingredient.

One fluid ounce of MGK® PBO 8-E contains 0.0625 pounds of active ingredient. To calculate the fluid ounces of MGK® PBO 8-E to use with a given insecticide, first calculate the amount of active ingredient of the insecticide to be used (in pounds), multiply that amount times the ratio of MGK® PBO 8-E desired (between 1 and 10), then divide that amount by 0.0625.

**Equation: (lbs. insecticide a.i. x desired ratio of MGK® PBO 8-E) / 0.0625 = Fluid Ounces of MGK® PBO 8-E required.**

In absence of specific data or experience on growing crops and ornamentals (outdoors, in greenhouses or indoors), it is recommended that tank mixes with MGK® PBO 8-E be tested for any phytotoxicity on a sample of the crop or growing plants prior to use.

**Crop Tank Mix Rate Chart:**

THE PURPOSE OF THIS CHART IS SOLELY TO RECOMMEND THE RATE OF MGK® PBO 8-E PER VOLUME OF TANK MIX PARTNER. THIS IS NOT A RECOMMENDATION OF TANK MIX PARTNER USE RATES. PLEASE REFER TO THE MOST CURRENT TANK MIX PARTNER LABEL TO DETERMINE THE RATE OF THAT SPECIFIC PRODUCT THAT IS APPROPRIATE FOR YOUR APPLICATION.

Tank Mix Partner Chemical Name Example Brand Name	IF Tank Mix Partner Rate per Acre is:	THEN MGK® PBO 8-E Rate per Acre is:	
		Recommended	Maximum
Abamectin 2% a.i. Agri-mek® 0.15 EC	5.0 fl. oz. to 10.0 fl. oz.	2.0 fl. oz.	8.0 fl. oz.
	16.0 fl. oz.	3.0 fl. oz.	
	20.0 fl. oz.	4.0 fl. oz.	
β-cyfluthrin 12.7% a.i. Baythroid® XL	0.8 fl. oz. to 1.6 fl. oz.	2.0 fl. oz.	8.0 fl. oz.
	1.8 fl. oz. to 2.4 fl. oz.	3.0 fl. oz.	
	2.8 fl. oz.	3.5 fl. oz.	
	3.2 fl. oz.	4.0 fl. oz.	
	6.4 fl. oz.	8.0 fl. oz.	
Cyfluthrin 25% a.i. Baythroid® 2	0.80 fl. oz.	2.0 fl. oz.	8.0 fl. oz.
	1.6 fl. oz.	4.0 fl. oz.	
	2.0 fl. oz.	5.0 fl. oz.	
	2.8 fl. oz.	7.0 fl. oz.	
	3.2 fl. oz. to 6.4 fl. oz.	8.0 fl. oz.	
Cyfluthrin 20% a.i. Renounce® 20 WP	1.0 fl. oz.	2.0 fl. oz.	8.0 fl. oz.
	2.0 fl. oz.	4.0 fl. oz.	
	2.5 fl. oz.	5.0 fl. oz.	
	3.0 fl. oz.	6.0 fl. oz.	
	3.5 fl. oz. (259 ml/Ha)	7.0 fl. oz. (518 ml/Ha)	
	4.0 fl. oz. to 8.0 fl. oz.	8.0 fl. oz.	
Cypermethrin 30.6% a.i. Ammo® 2.5 EC Up-Cyde 2.5 EC	2.0 fl. oz.	6.4 fl. oz.	8.0 fl. oz.
	2.5 fl. oz. to 5.0 fl. oz.	8.0 fl. oz.	
Bifenthrin 10% a.i. Brigade WSB	6.4 fl. oz.	6.4 fl. oz.	8.0 fl. oz.
	8.0 fl. oz. to 32.0 fl. oz.	8.0 fl. oz.	
Bifenthrin 25.1% a.i. Capture® 2EC Brigade® 2EC Bifenthrin 2EC	1.6 fl. oz.	4.0 fl. oz.	8.0 fl. oz.
	2.10 fl. oz.	5.3 fl. oz.	
	2.60 fl. oz.	6.4 fl. oz.	
	3.20 fl. oz. to 32.0 fl. oz.	8.0 fl. oz.	
Esfenvalerate 8.4% a.i. Asana® XL	2.90 fl. oz.	2.4 fl. oz.	8.0 fl. oz.
	4.80 fl. oz.	4.0 fl. oz.	
	5.80 fl. oz.	4.8 fl. oz.	
	8.0 fl. oz.	6.4 fl. oz.	
	9.60 fl. oz. to 14.50 fl. oz.	8.0 fl. oz.	
Fenprothrin 30.9% a.i. Danitol® 2.4 EC Spray Tame® 2.4 EC Spray	5-1/3 fl. oz. to 21-1/3 fl. oz.	8.0 fl. oz.	8.0 fl. oz.
Imidacloprid 17.4% a.i. Provado® 1.6	2.0 fl. oz.	4.0 fl. oz.	8.0 fl. oz.
	3.0 fl. oz.	6.0 fl. oz.	
	3.8 fl. oz.	7.6 fl. oz.	
	4.0 fl. oz. to 20.0 fl. oz.	8.0 fl. oz.	
Imidacloprid 75.0% a.i. Provado® Solupak 75%	0.8 fl. oz. to 1.0 fl. oz.	8.0 fl. oz.	8.0 fl. oz.
Lambda-cyhalothrin 11% a.i. Warrior®	1.92 fl. oz.	2.4 fl. oz.	8.0 fl. oz.
	2.56 fl. oz.	3.2 fl. oz.	
	3.20 fl. oz.	4.0 fl. oz.	
	3.84 fl. oz.	4.8 fl. oz.	
Methomyl 29% a.i. Lannate® LV	12.0 fl. oz. to 48.0 fl. oz.	8.0 fl. oz.	8.0 fl. oz.



Permethrin 38.4% Pounce® 3.2 EC Permethrin 3.2EC	2.0 fl. oz.	4.0 fl. oz.	8.0 fl. oz.
	4.0 fl. oz. to 16.0 fl. oz.	8.0 fl. oz.	
Permethrin 25% a.i. Pounce® 25WP	3.2 fl. oz.	4.0 fl. oz.	8.0 fl. oz.
	6.4 fl. oz. to 32.0 fl. oz.	8.0 fl. oz.	
Zeta-cypermethrin 9.6% a.i. Mustang Max®	1.28 fl. oz. to 1.92 fl. oz.	2.0 fl. oz.	8.0 fl. oz.
	2.24 fl. oz. to 3.0 fl. oz.	3.0 fl. oz.	
	3.2 fl. oz. to 4.0 fl. oz.	4.0 fl. oz.	
Zeta-cypermethrin 18.1% a.i. Fury®	1.4 fl. oz.	2.6 fl. oz.	8.0 fl. oz.
	1.9 fl. oz.	3.5 fl. oz.	
	2.0 fl. oz.	3.8 fl. oz.	
	2.4 fl. oz.	4.5 fl. oz.	
	2.8 fl. oz.	5.3 fl. oz.	
	3.0 fl. oz.	5.6 fl. oz.	
	3.4 fl. oz.	6.4 fl. oz.	
4.3 fl. oz.	8.0 fl. oz.		

#### **CHEMIGATION USE DIRECTIONS:**

Apply this product only through sprinkler (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 non-uniform distribution of treated water.

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

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

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

#### **SPRINKLER CHEMIGATION:**

- 1.) 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 back flow.
- 2.) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3.) The pesticide injection pipeline must 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.
- 4.) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5.) The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6.) 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.
- 7.) Do not apply when wind speed favors drift beyond the area intended for treatment.
- 8.) Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of more dilute suspension per unit of time.
- 9.) Apply in accordance with tank mixing partner chemigation instructions.

#### **CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS:**

- 1) Public water system means a system for the provision to the public 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.
- 2) Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) of the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to break (air gap) between the flow outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 3) The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.

- 4) The pesticide injection pipeline must contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump and be 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.
- 5) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 6) 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.
- 7) Do not apply when wind speed favors drift beyond the area intended for treatment.
- 8) Apply in accordance with tank mixing partner chemigation instructions.

## STORAGE AND DISPOSAL

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

### PESTICIDE STORAGE:

Store in a cool, dry area. Always store pesticides in the original container. Store away from food and pet food.

### PESTICIDE DISPOSAL:

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

### CONTAINER HANDLING:

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill.

#### [For totes/55 gal containers]

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Triple rinse as follows [for containers of 5 gallons (18.9 L) or less]: 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.

Triple rinse as follows [for containers greater than 5 gallons (18.9 L)]: 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 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.

#### [Or for Refillable Containers]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. 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 rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.