




# exponent<sup>®</sup>

Insecticide Synergist

-  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



#### ACTIVE INGREDIENT:

* Piperonyl butoxide, Technical.....	91.30%
OTHER INGREDIENTS .....	8.70%
	100.00%

\* Equivalent to 73.04% (butylcarbityl) (6-propylpiperonyl) ether and 18.26% related compounds.

KEEP OUT OF REACH OF CHILDREN  
**CAUTION PRECAUCIÓN**

See back for first aid and precautionary statements.

## 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 protection 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 to 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
- Chemical-resistant gloves made of any waterproof material, and 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, 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.

## GENERAL PRECAUTIONS AND USE RESTRICTIONS

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. Exponent® is a synergist that aids in blocking oxidative resistance that may develop in insects and mites and has no insecticidal properties of its own.

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 use treated article before it is dry.

Do not apply directly to or near water, storm drains, or drainage ditches. Do not apply when windy. To prevent product run-off, do not over water the treated area(s) or apply when heavy rain is expected. Rinse applicator over lawn or garden area only.

### Application types:

Exponent® may be applied via ground application units, hand-held sprayers, power sprayers, foggers and ULV applicators, and chemigation.

Not for use in outdoor residential misting systems.

## FOR USE ON CROPS

**Exponent® 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 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.

### Use is allowed on listed crops whether grown for food, forage or seed production.

**ROOT AND TUBER VEGETABLES:** Arracacha, Arrowroot, Purple Arrowroot, Japanese Artichoke, Jerusalem Artichoke, Beet, Sugar Beet, Edible Burdock, Carrot, Cassava (bitter or sweet), Celeriac (celery root), Chervil (turnip rooted), Chicory, Dasheen (taro), Ginger, Ginseng, Horseradish, Leren, Parsley (turnip rooted), Parsnip, Potato, Radish, Japanese Radish (daikon), Rutabaga, Salsify (oyster plant), Black Salsify, Spanish Salsify, Sweet Potato, Tanier (Cocoyam), Turmeric, Turnip, True Yam, Bean Yam.

**LEAVES OF ROOT AND TUBER VEGETABLES:** Beet, Sugar Beet, Edible Burdock, Carrot, Cassava (bitter or sweet), Celeriac, Chervil (turnip rooted), Chicory, Dasheen, Parsnip, Radish, Japanese Radish (daikon), Rutabaga, Black Salsify, Sweet Potato, Tanier, Turnip, True Yam.

**BULB VEGETABLES:** (Allium spp.): Including (but not limited to) Garlic, Great-headed Garlic, Leek, Onion (dry bulb and green), Spring Onion or Scallions, Welch Onion, Shallot.

**LEAFY VEGETABLES:** Amaranth (leafy amaranth, Chinese spinach, tampala), Arrugula (roquette), Celery, Celtauce, Chervil, Corn Salad, Chrysanthemum (edible leaved), Chrysanthemum (gardland), Cress (garden), Upland Cress (yellow rockets, winter cress), Dandelion, Dock (sorrel), Endive, Escarole, Fennel (Florence), Lettuce (head and leaf), Orach, Parsley, Purslane (garden & winter), Rhubarb, Romaine, Spinach, Fine Spinach (Malabar, Ceylon), Spinach (New Zealand), Swiss Chard.

**BRASSICA (COLE) LEAFY VEGETABLES:** Broccoli, Broccoflower, Cavalo Broccolo, Chinese Broccoli (Gai Lan), Broccoli raab (rapini), Brussels Sprouts, Cabbage, Chinese Cabbage (Bok Choy), Chinese Cabbage (Napa), Chinese Mustard Cabbage (Gai Choy), Cauliflower, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard Spinach, Rape Greens.

**LEGUME VEGETABLES (SUCCULENT OR DRIED):** Adzuki Beans, Asparagus Beans, Black-eyed Peas, Broad Beans (fava beans), Catjang, Chick Peas (garbanzo beans), Chinese Longbeans, Cowpeas, Crowder Peas, Field Beans, Guar, Jackbeans, Sword Beans, Kidney Beans, Lablab

Beans (hyacinth beans), Lima Beans, Lentils, Moth Beans, Mung Beans, Navy Beans, Peas (dwarf, edible pod, English, garden green, field, snowpeas, sugar snap peas), Pigeon Peas, Pinto Beans, Rice Beans, Runner Beans, Snap Beans, Southern Peas, Soybeans, Grain Lupin, Sweet Lupin, White Lupin, Pole Beans, Tepary Beans, Urd Beans, Wax Beans, Yardlong Beans.

**FOLIAGE OF LEGUME VEGETABLES:** Plant part of any legume vegetable included in the legume vegetable group that will be used as animal feed including any variety of Beans, Field Peas.

**FRUITING VEGETABLES:** Eggplant, Ground Cherry, Pepinos, Peppers (includes bell peppers, chili peppers, cooking peppers, pimentos, sweet peppers), Tomatillo, Tomatoes.

**CUCURBIT VEGETABLES:** Balsam Pear (bitter melon), Chinese Waxgourd (Chinese preserving melon), Citron Melon, Cucumber, Gherkin, Edible Gourds, Melons (including hybrids, ananas, canary, cantaloupe, casaba, charentais, crenshaw, galia, honeydew melons, honey balls, mango melon, muskmelon, Persian melon, piel de sapo), Pumpkin, Squash (summer & winter), Western Shipper Melon, Watermelon (including hybrids, seeded and seedless).

**CITRUS FRUITS:** Calamondin, Citrus Citron, Citrus Hybrids, Grapefruit, Kumquats, Lemons, Limes, Mandarin (tangerine), Orange (sweet & sour), Pummelo, Satsuma Mandarin.

**POME FRUITS:** Apple, Crabapple, Loquat, Mayhaw, Pear, Oriental Pear, Quince.

**STONE FRUITS:** Apricot, Cherry (sweet & sour), Nectarine, Peach, Plum, Prune, Chickasaw Plum, Damson Plum, Japanese Plum, Plumcot.

**SMALL FRUITS AND BERRIES:** Bingleberry, Blackberry, Blueberry, Cranberry, Currant, Dewberry, Elderberry, Gooseberry, Grape, Huckleberry, Loganberry, Lowberries, Olallie Berry, Black Raspberry, Red Raspberry, Strawberry, Youngberry.

**TREE NUTS:** Almond, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert (hazelnut), Hickory Nut, Macadamia Nut (bush nut), Pecan, Pistachio, Walnut, Black and English (Persian).

**ORIENTAL VEGETABLES:** Japanese Artichoke, Chinese Broccoli (Gai Lan), Chinese Cabbage (Bok Choy), Chinese Mustard Cabbage (Gai Choy), Dasheen, Ginger, Ginseng, Chinese Longbeans, Mung Beans, Citron Melon, Balsam Pear (bitter melon), Japanese Radish (daikon), Chinese Spinach, Chinese Waxgourd.

**SUBTROPICAL FRUITS:** Avocado, Banana, Carob, Barbados Cherry, Cherimoya, Dates, Durian (jackfruit), Feijoa, Figs, Guava, Kiwifruit, Lychee, Mango, Papaya, Passion Fruit, Paw Paw, Persimmon, Pineapple, Pomegranate.

**ADDITIONAL CROPS:** Including Artichoke, Asparagus, Avocado, Coffee, Cotton, Hemp, Hops, Jojoba, Mushroom, Olives, Okra, Peanuts, Safflowers, Sesame, Sugar Cane, Sunflowers, Tea, Tobacco.

**CEREAL GRAINS:** Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl Millet, Popcorn, Rice, Rye, Sorghum (milo), Teosine, Triticale, Wheat, Wild Rice.

**FORAGE, FODDER AND STRAW OF CEREAL GRAINS:** Barley, Buckwheat, Corn (sweet and field), Millet, Proso, Oats, Pearl, Popcorn, Rice, Rye, Sorghum (milo), Teosine, Triticale, Wheat, Wild Rice.

**GRASSES FOR SEED, FORAGE, FODDER AND HAY:** Any grass (gramineal family, (green or cured), except sugarcane and those listed in the cereal grains group) that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage, Bermuda Grass, Bluegrass, Bromegrass, Fescue Annual Ryegrass, Festulolium, Hybrid Ryegrass, Italian Ryegrass, Meadow Fescue, Orchard Grass, Sudangrass, Sorghum-sudan, Tall Fescue, Timothy, Wheat Hay, Turfgrass Varieties, Bentgrass, Kentucky Bluegrass, Specialty Grasses.

**NON-GRASS ANIMAL FEEDS:** Alfalfa, Velvet Bean, Clover, Kudzu, Lespedeza, Lupin, Sainfoin, Trefoil, Crown Vetch, and Milk Vetch.

**HERBS AND SPICES:** Allspice, Angelica, Anise (anise seed), Annatto, Balm, Basil, Borage, Burnet, Camomile, Caper Buds, Caraway, Black Caraway, Cardamon, Cassia Bark, Cassia Buds, Catnip, Celery Seed, Chervil (dried), Chives, Chinese Chive, Clary, Clove Buds, Coriander (cilantro or Chinese parsley leaf), Coriander (cilantro seed), Costmary, Culantro, Cumin, Curry Leaf, Dill (dill weed), Dill (seed), Fennel (Italian and sweet), Fenugreek, Grains of Paradise, Horehound, Hyssop, Juniper Berry, Lavender, Lemongrass, Lovage (leaf & seed), Mace, Marigold, Sweet Marjoram, Wild Marjoram, Mustard (seed), Nasturtium, Nutmeg, Parsley, Oregano, Mint, Paprika, Parsley, Pennyroyal, Pepper (black & white), Poppy Seed, Rosemary, Rue, Saffron, Sage, Savory, Summer and Winter Savory, Sweet Bay (bay leaf), Tansy, Tarragon, Thyme, Vanilla, Watercress, Wintergreen, Woodruff, Wormwood.

**OILSEED CROPS:** Canola, Crambe, Rapeseed, Flax, Safflowers, Sesame, Soybeans, Sunflowers.

**ORNAMENTALS:** African Violet, Ageratum, Aster, Azalea, Begonia, Cacti, Calceolaria, Calendula, Calla, Camellia, Carnation, Ceanothus, Christmas Trees, Conifer Plantations, Conifer Seed Orchards, Cineraria, Chrysanthemum, Coleus, Cyclamen, Cypress, Daffodil, Dahlia, Delphinium, Dogwood, Fern, Ficus, Foliage Plants, Forest Tree Nurseries, Palm and Tropical Trees and Nurseries, Fuschia, Gardenia, Geranium, Gladiolus, Gloxinia, Gypsophila, Holly, Hyacinth, Hydrangea, Iris, Juniper, Lilies, Maidenhair Fern, Marigold, Narcissus, Palm, Pansy, Pelargonium, Peony, Petunia, Philodendron, Phlox, Pine, Pyracantha, Rhododendron, Roses, Rubber Plant, Snapdragon, Stock, Sweet Pea, Tulips, Viburnum, Wandering Jew, Yew, Zinnia and Andromeda, Arborvitae, Ash, Beech, Birch, Boxwood, Cotoneaster, Crabapple, Dogwood, Elm, Euonymus, Fir, Firethorn, Forsythia, Hawthorn, Hemlock, Hickory, Holly, Honey Locust, Horse Chestnut, Juniper, Larch, Laurel, Lilac, Linden, Mimosa (silk tree), Myrtle, Oak, Pine, Privet, Tulip Tree, Willow.

**CROP USE RATES AND RESTRICTIONS:**

Food crops grown outdoors or in greenhouses in agricultural settings		
	Maximum use rate	Use restrictions
Field and orchard crops	8.0 fl. oz. per acre (0.5 lbs. a.i./acre) or 0.2 fl. oz. per 1,000 sq. ft.	<ul style="list-style-type: none"> <li>Do not apply more than ten times per season.</li> <li>Do not reapply within three days except under extreme pest pressure.</li> </ul>
Hydroponically grown crops	1.0 ppm a.i. in water	<ul style="list-style-type: none"> <li>In case of extreme pest pressure do not reapply within 24 hours.</li> </ul>
Greenhouse space sprays	0.22 fl. oz. per 10,000 cu. ft.	<ul style="list-style-type: none"> <li>Do not apply to cotton within 14 days of seed harvest.</li> </ul>
Greenhouse surface sprays	0.2 fl. oz. per 1,000 sq. ft.	<ul style="list-style-type: none"> <li>A ten-day water hold is required for all pyrethrins applications when rice fields are flooded.</li> </ul>
Greenhouse grown ornamental, flowering and foliage plants		
	Maximum use rate	Use restrictions
Surface applications	0.58 fl. oz. per 1,000 sq. ft. or 24 fl. oz. per acre	Do not apply more than one time per day.
Space sprays	0.67 fl. oz. per 10,000 cu. ft.	
Forestry	20 fl. oz. per acre	
Sod farms	16 fl. oz. per acre	

Observing the directions and volume of water on the insecticide label, tank-mix at a rate of 2 to 8 fluid ounces of Exponent® per acre. Eight fluid ounces will provide 0.5 lb. of Exponent's 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 should conform to accepted use precautions and directions for both products.

Mix Exponent® with an insecticide based on the amount of active ingredient. Most insecticides are synergized at the ratio range of 1 to 10 parts Exponent's active ingredient to 1 part of an insecticide's active ingredient.

One fluid ounce of Exponent® contains 0.0625 pounds of active ingredient. To calculate the fluid ounces of Exponent® 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 Exponent® desired (between 1 and 10), then divide that amount by 0.0625.

**Equation:**

$$\frac{(\text{lbs. insecticide ai x desired ratio of Exponent}^{\circledR})}{0.0625} = \text{Fluid ounces of Exponent}^{\circledR} \text{ required}$$

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

ALWAYS READ AND FOLLOW LABEL DIRECTIONS OF ALL PRODUCTS USED IN A TANKMIX. DO NOT MIX EXPONENT® WITH ANY PRODUCT HAVING LABEL PROHIBITIONS AGAINST SUCH MIXING.

**ALWAYS FOLLOW THE MOST RESTRICTIVE LABEL INSTRUCTIONS AND PRECAUTIONS OF ALL PRODUCTS IN A TANKMIX.**

**CROP TANK MIX RATE CHART:**

THE PURPOSE OF THIS CHART IS SOLELY TO RECOMMEND THE RATE OF EXPONENT® PER VOLUME OF TANKMIX 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 Exponent® rate per acre is:	
		Recommended	Maximum
Abamectin 2.0% a.i. Agri-mek® 0.15 EC	5-10 fl. oz.	2 fl. oz.	8 fl. oz.
	16 fl. oz.	3 fl. oz.	
	20 fl. oz.	4 fl. oz.	
β-cyfluthrin 12.7% a.i. Baythroid® XL	0.8-1.6 fl. oz.	2 fl. oz.	8 fl. oz.
	1.8-2.4 fl. oz.	3 fl. oz.	
	2.8 fl. oz.	3.5 fl. oz.	
	3.2 fl. oz.	4 fl. oz.	
	6.4 fl. oz.	8 fl. oz.	
Cyfluthrin 25.0% a.i. Baythroid® 2	0.8 fl. oz.	2 fl. oz.	8 fl. oz.
	1.6 fl. oz.	4 fl. oz.	
	2.0 fl. oz.	5 fl. oz.	
	2.8 fl. oz.	7 fl. oz.	
Cyfluthrin 20.0% a.i. Renounce® 20 WP	3.2-6.4 fl. oz.	8 fl. oz.	8 fl. oz.
	1 fl. oz.	2 fl. oz.	
	2 fl. oz.	4 fl. oz.	
	2.5 fl. oz.	5 fl. oz.	
	3 fl. oz.	6 fl. oz.	
	3.5 fl. oz.	7 fl. oz.	
Cypermethrin 30.6% a.i. Ammo® 2.5 EC Up-Cycle® 2.5 EC	4-8 fl. oz.	8 fl. oz.	8 fl. oz.
	2 fl. oz.	6.4 fl. oz.	
Bifenthrin 10.0% a.i. Brigade® WSB	2.5-5 fl. oz.	8 fl. oz.	8 fl. oz.
	6.4 oz.	6.4 fl. oz.	
Bifenthrin 25.1% a.i. Capture® 2 EC Brigade® 2 EC Bifenthrin 2 EC™	8-32 oz.	8 fl. oz.	8 fl. oz.
	1.6 fl. oz.	4 fl. oz.	
	2.1 fl. oz.	5.3 fl. oz.	
	2.6 fl. oz.	6.4 fl. oz.	
Esfenvalerate 8.4% a.i. Asana® XL	3.2-32 fl. oz.	8 fl. oz.	8 fl. oz.
	2.9 fl. oz.	2.4 fl. oz.	
	4.8 fl. oz.	4 fl. oz.	
	5.8 fl. oz.	4.8 fl. oz.	
	8 fl. oz.	6.4 fl. oz.	
Fenpropathrin 30.9% a.i. Danitol® 2.4 EC Spray Tame® 2.4 EC Spray	9.6-14.5 fl. oz.	8 fl. oz.	8 fl. oz.
	5 1/3-21 1/3 fl. oz.	8 fl. oz.	
Imidacloprid 17.4% a.i. Provado® 1.6	2 fl. oz.	4 fl. oz.	8 fl. oz.
	3 fl. oz.	6 fl. oz.	
	3.8 fl. oz.	7.6 fl. oz.	
Imidacloprid 75.0% a.i. Provado® Solupak 75.0%	4-20 fl. oz.	8 fl. oz.	8 fl. oz.
	0.8-1 fl. oz.	8 fl. oz.	
Lambda-cyhalothrin 11.0% a.i. Warrior®	1.92 fl. oz.	2.4 fl. oz.	8 fl. oz.
	2.56 fl. oz.	3.2 fl. oz.	
	3.2 fl. oz.	4 fl. oz.	
	3.84 fl. oz.	4.8 fl. oz.	
Methomyl 29.0% a.i. Lannate® LV	12-48 fl. oz.	8 fl. oz.	8 fl. oz.
Permethrin 38.4% Pounce® 3.2 EC Permethrin 3.2 EC	2 fl. oz.	4 fl. oz.	8 fl. oz.
	4-16 fl. oz.	8 fl. oz.	
Permethrin 25.0% a.i. Pounce® 25 WP	3.2 oz.	4 fl. oz.	8 fl. oz.
	6.4-32 oz.	8 fl. oz.	
Zeta-cypermethrin 9.6% a.i. Mustang Max®	1.28-1.92 fl. oz.	2 fl. oz.	8 fl. oz.
	2.24-3 fl. oz.	3 fl. oz.	
	3.2-4 fl. oz.	4 fl. oz.	
Zeta-cypermethrin 18.1% a.i. Fury®	1.4 fl. oz.	2.6 fl. oz.	8 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.		

**ALWAYS FOLLOW THE MOST RESTRICTIVE LABEL INSTRUCTIONS AND PRECAUTIONS OF ALL PRODUCTS IN A TANK MIX.**

**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.

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

Systems must be 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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

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.

**ALWAYS FOLLOW THE MOST RESTRICTIVE LABEL INSTRUCTIONS AND PRECAUTIONS OF ALL PRODUCTS IN A TANK MIX.**

**NON-CROP USE DIRECTIONS:**

EXPONENT® MAY BE USED IN A TANK MIX WITH INSECTICIDES LABELED FOR USE IN THE FOLLOWING AREAS OR USE PATTERNS:

**Residential dwellings 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.

When used as a space spray do not exceed 0.4 fl. oz. of Exponent® per 1,000 cu. ft. of space treated. Ventilate well prior to reentry or reoccupation. Do not apply more than 1 time per day.

If used as a crack and crevice, broadcast surface spray or spot treatment, do not exceed 8 fl. oz. of Exponent® per 1,000 square feet treated. For metered release device space sprays, do not exceed 0.80 oz. of Exponent® per 1,000 cu. ft. of space treated per day. Allow spray to dry prior to reentry. Do not apply more than 1 time per day.

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 before use.

Do not use in aircraft cabins except in compliance with PR Notice 96-3.

**TREATMENTS IN FOOD HANDLING ESTABLISHMENTS (places other than private residences in which food is held, processed, prepared or served):** Do not make space spray applications when facility is in operation.

During space spray applications, cover or remove food. Cover food processing surfaces or clean after treatment with a suitable detergent and rinse with potable water before use.

**NON-FOOD AREAS:** Exponent® may be used to treat nonfood areas. Nonfood areas include areas such as 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).

**FOOD AREAS:** Exponent® can be used to treat food areas of food handling establishments, restaurants, or other areas where foods are commercially prepared or served. Do not make space spray application when facility is in operation. During space spray applications, cover or remove food. During space spray applications, cover food-processing surfaces or clean after treatment with a suitable detergent and rinse with potable water before use.

**POST HARVEST APPLICATION TO VEGETABLES, FRUITS, NUTS AND OTHER COMMODITIES:** Including Potatoes, Tomatoes, Peas, Sweet Potatoes, Apples, Blackberries, Blueberries, Boysenberries, Cherries, Crabapples, Currants, Dewberries, Figs, Gooseberries, Grapes, Guava, Loganberries, Mangoes, Muskmelons, Oranges, Peaches, Pears, Pineapples, Plums, Raspberries, Almonds, Walnuts, Copra and Peanuts.

When used as a space spray to fruits, vegetables and copra, do not exceed 0.16 fl. oz. of Exponent® per 1,000 cu. ft. of space treated.

When used as a surface application to the commodities listed, do not exceed 1.6 fl. oz. of Exponent® per 1,000 sq. ft. treated. When used as a surface application to fruits or tomatoes in baskets or hampers, do not exceed 1.3 x 10<sup>-5</sup> oz. of Exponent® per lb. of fruit.

When used as a dip or spray, do not exceed 0.64 fl. oz. of Exponent® per 10 gallons of water.

Do not apply more than 1 time per day. Do not reapply within 7 days. Do not apply more than 10 times to Sweet Potatoes.

**POST HARVEST APPLICATION TO STORED GRAIN AND SEED:** Including Barley, Beans, Lima Beans, Birdseed, Buckwheat, Cocoa Beans, Corn, Cottonseed, Flax, Grain Sorghum, Oats, Field Peas, Rice, Rye and Wheat.

When used in a "top dress" surface application, do not exceed 8 fl. oz. of Exponent® per 1,000 sq. ft. treated.

When used in Direct application to bulk grain and seed, do not exceed 16 fl. oz. of Exponent® per 1,000 bushels of grain.

Do not reapply within 30 days.

**Maximum application rates of Exponent® per 100 lbs. of commodity (cwt):**

Barley .....	0.53 fl. oz. per cwt
Beans .....	0.43 fl. oz. per cwt
Lima Beans .....	0.46 fl. oz. per cwt
Birdseed .....	0.51 fl. oz. per cwt
Buckwheat .....	0.53 fl. oz. per cwt
Cocoa Beans .....	0.59 fl. oz. per cwt
Corn .....	0.46 fl. oz. per cwt
Cottonseed .....	0.91 fl. oz. per cwt
Flax .....	0.46 fl. oz. per cwt
Grain Sorghum .....	0.46 fl. oz. per cwt
Oats .....	0.80 fl. oz. per cwt
Field peas .....	0.43 fl. oz. per cwt
Rice .....	0.58 fl. oz. per cwt
Rye .....	0.46 fl. oz. per cwt
Wheat (club, common, durham) .....	0.43 fl. oz. per cwt
(emmer, spelt) .....	0.64 fl. oz. per cwt

**FOOD STORED IN BAGS:** May be used as a space spray made to the surfaces of bags of stored food products. Do not exceed 0.4 fl. oz. of Exponent® per 1,000 cu. ft. of space treated. Direct application to food contact surfaces is prohibited.

**GENERAL OUTDOOR SITES:** Sites such as 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 Exponent® per 1,000 sq. ft. treated.

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

Do not apply more than 1 time per day.

**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 Exponent® per 1,000 sq. ft. (16 fl. oz. per acre).

When used as a crack and crevice or spot surface treatment (including applications for fire ants or turf diagnostic aid), do not exceed 8 fl. oz. of Exponent® per 1,000 sq. ft. Do not apply more than 1 time per day.

**PET PREMISE TREATMENT:** May be used in a space spray application for pet premises. Do not exceed 0.5 fl. oz. of Exponent® per 1,000 cu. ft. of space treated.

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

**DIRECT APPLICATION TO LIVESTOCK, DAIRY AND POULTRY ANIMALS:** Exponent® may be tanked mixed with insecticides labeled for application directly to non-domestic animals (including lactating dairy animals, meat and poultry animals). Do not apply more than 1 time per day. Do not apply microencapsulated product to lactating or food animals.

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

Exponent® may be tanked 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 ANIMALS ARE NOT PRESENT:** When used as a space spray, do not exceed 4.0 fl. oz. of Exponent® 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. treated. For metered release device space sprays, do not exceed 0.80 oz. of Exponent® per 1,000 cu. ft. of space treated per day.

Do not apply more than 1 time per day.

**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 Exponent® 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.

**OUTDOOR AGRICULTURAL PREMISES:** When used as a broadcast surface spray, do not exceed 0.32 fl. oz. of Exponent® per 1,000 sq. ft. treated (16 fl. oz. per acre).

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 Exponent® per 1,000 sq. ft. of space treated.

Do not apply more than 1 time per day.

**EXPONENT® NON-CROP USE RATES AND RESTRICTIONS:** FOR GROWING PLANTS THAT WILL BE CONSUMED AS FOOD, DO NOT EXCEED 0.384 FL. OZ. (2.3 teaspoons) OF EXPONENT® PER 1,000 SQUARE FEET, PER APPLICATION.

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

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.

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

**NON-CROP MIXING CHART BASED ON TANK-MIX PARTNER VOLUME:** THE PURPOSE OF THIS CHART IS SOLELY TO RECOMMEND THE RATE OF EXPONENT® 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 (volume) is:	Then Exponent® rate recommended is:
Tau-fluvalenate 22.3% a.i. Mavrik Aquaflow® Mavrik® Perimeter	0.2 fl. oz.	0.5 fl. oz.
	0.5 fl. oz.	1.25 fl. oz.
	4-10 fl. oz.	10-25 fl. oz.
Deltamethrin 4.75% a.i. Suspend® SC	0.25-0.5 fl. oz.	0.25 fl. oz.
	0.75 fl. oz.	0.4 fl. oz.
	1 fl. oz.	0.5 fl. oz.
	1.5 fl. oz.	0.75 fl. oz.
	4 fl. oz.	2 fl. oz.
	8 fl. oz.	4 fl. oz.
Bifenthrin 7.9% a.i. TalstarOne®	1 fl. oz.	0.8 fl. oz.
	2 fl. oz.	1.6 fl. oz.
	5 fl. oz.	4 fl. oz.
	10 fl. oz.	8 fl. oz.
β-Cyfluthrin 11.8% a.i. Tempo® SC Ultra	32 fl. oz.	26 fl. oz.
	8 ml	0.34 fl. oz.
	12 ml	0.5 fl. oz.
	16 ml	0.68 fl. oz.
	24 ml	1 fl. oz.
	32 ml	1.25 fl. oz.
	40 ml	1.7 fl. oz.
	60 ml	2.5 fl. oz.

Tank mix partner Chemical name Example brand name	If tank mix partner rate (volume) is:	Then Exponent® rate recommended is:
Esfenvalerate 6.4% a.i. Onslaught®	0.5 fl. oz.	0.35 fl. oz.
	1 fl. oz.	0.70 fl. oz.
Esfenvalerate 9.36% a.i. Evercide® MC	0.4 fl. oz.	0.4 fl. oz.
	0.8 fl. oz.	0.8 fl. oz.
Esfenvalerate 3.48% a.i. Conquer Evercide® EC	1 fl. oz.	0.3 fl. oz.
	2 fl. oz.	0.6 fl. oz.
Cyfluthrin 6.0% a.i. Cy-Kick® CS	1 fl. oz.	0.6 fl. oz.
	2 fl. oz.	1.2 fl. oz.
Lambda-cyhalothrin 9.7% a.i. Demand® CS	0.2 fl. oz.	0.25 fl. oz.
	0.4 fl. oz.	0.5 fl. oz.
	0.8 fl. oz.	1 fl. oz.
Cypermethrin 25.3% a.i. Demon® Max	0.33 fl. oz.	0.85 fl. oz.
	0.5 fl. oz.	1.3 fl. oz.
	0.65 fl. oz.	1.7 fl. oz.
	1 fl. oz.	2.5 fl. oz.
	1.3 fl. oz.	3.4 fl. oz.
	2.6 fl. oz.	6.7 fl. oz.
Permethrin 36.8% a.i. Astro™ Dragnet® SFR Permethrin Pro Tenguard®	5.1 fl. oz.	13 fl. oz.
	1 fl. oz.	0.4 fl. oz.
	1.67 fl. oz.	0.67 fl. oz.
	3.33 fl. oz.	1.33 fl. oz.
	6.67 fl. oz.	2.67 fl. oz.
	16 fl. oz.	6 fl. oz.
Permethrin 25.6% a.i. Prelude®	1 gal.	50 fl. oz.
	1.25 gal.	64 fl. oz.
	0.64 fl. oz.	0.25 fl. oz.
	1 fl. oz.	0.25 fl. oz.
	1.28 fl. oz.	0.33 fl. oz.
	2.6 fl. oz.	0.67 fl. oz.
	3.75 fl. oz.	1 fl. oz.
	5 fl. oz.	1.25 fl. oz.
Permethrin 10.0% a.i. Evercide® Permethrin 10.0%	6 fl. oz.	1.5 fl. oz.
	10.4 fl. oz.	2.5 fl. oz.
	1 gal.	32 fl. oz.
	0.32 fl. oz.	0.25 fl. oz.
	0.64 fl. oz.	0.25 fl. oz.
Imidichloprid 21.4% a.i. Premise® 2.0 Imidipro®	1 fl. oz.	0.25 fl. oz.
	3.2 fl. oz.	0.5 fl. oz.
	6.4 fl. oz.	0.5 fl. oz.
	0.27 fl. oz.	0.67 fl. oz.
	0.54 fl. oz.	1.35 fl. oz.
	1 fl. oz.	2.5 fl. oz.
	1.08 fl. oz.	2.7 fl. oz.
	1.35 fl. oz.	3.37 fl. oz.
2.7 fl. oz.	6.75 fl. oz.	
5.4 fl. oz.	13.5 fl. oz.	

ALWAYS READ AND FOLLOW LABEL DIRECTIONS OF ALL PRODUCTS USED IN A TANK MIX.

ALWAYS FOLLOW THE MOST RESTRICTIVE LABEL INSTRUCTIONS AND PRECAUTIONS OF ALL PRODUCTS IN A TANK MIX.

DO NOT MIX EXPONENT® WITH ANY PRODUCT HAVING LABEL PROHIBITIONS AGAINST SUCH MIXING.

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 Exponent® be tested for any phytotoxicity on a representative sample of the growing plants prior to use.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a warm, 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:** Nonrefillable 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.

Triple Rinse as follows (for containers of 5 gallons 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): 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.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### CAUTION

Harmful if swallowed, inhaled, or absorbed through skin. Causes eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below.

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 plus socks.

In addition to the above PPE, mixers and loaders supporting aerial applications to forests and/or applicators using a high pressure 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 hand held 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

User 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 may 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 wash-waters or rinsate.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other water unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

## PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

## 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:

- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or a doctor.
- Do not give anything by mouth to an unconscious person.

#### IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.
- Call a poison control center or doctor for treatment advice.

#### IF ON SKIN OR CLOTHING:

- 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.

#### IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for further treatment advice.

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.

**exponent**

EPA Reg. No. 1021-1511  
EPA Est. No. 1021-MN-2

**MGK**

Exponent, McLaughlin Gormley King Company and MGK are registered trademarks of McLaughlin Gormley King Company. All other marks are property of their respective holders. Manufactured by McLaughlin Gormley King Company®. ©2010 McLaughlin Gormley King Company. All rights reserved. 8810 Tenth Avenue North, Minneapolis, MN 55427 037-1733d/0310