

Technical Bulletin



exponent® Insecticide Synergist

Exponent® Insecticide Synergist is an emulsifiable concentrate designed for use in tank mixes with insecticides and acaricides to help control insects and mites. While Exponent has no insecticidal properties of its own, it works as a synergist to increase insect susceptibility and enhance the efficacy of the tank-mix partner. Exponent can support treatment performance against pests with oxidative resistance.

Features and Benefits

- Enhances insecticide efficacy when used as a tank-mix synergist
- Increases insect susceptibility to the tank-mix partner
- Helps inhibit resistance through the mixed function oxidase (P-450) enzyme system

Product Specifications

Key Target Pest(s)	See pest listing on tank mix partner label
Signal Word	Caution
Form	Concentrate
Active Ingredient(s)	Piperonyl butoxide (PBO)
Class of Chemistry	Synergist
Activity	Synergist – increases susceptibility to tank mix partner
Mode of Action	N/A
Stability	If frozen, thaw and shake before use
Flammability	Not listed as flammable or combustible
Odor	Slight – Solvent
PPE Requirements	Long pants, long sleeves, shoes and socks, chemical resistant gloves, goggles or face shield, respirator (enclosed spaces)
Retreat Interval	1 day (see label for specific applications) • Follow all instructions and retreat intervals for all tank mix partners
Mix or Dilute In	Water or oil (follow label instructions for tank mix partner)
Shelf Life	3 years or more in ideal storage conditions



Scan the QR code or visit
mgk.com
to see resources and
additional information.

Packaging

- 1 gallon bottle (4 per case)
- 55 gallon drum

Use Sites

Exponent may be used in a tank mix with insecticides labeled for use in areas including:

Indoor and Outdoor Areas

- Residential homes
- Commercial buildings
- Food and non-food areas
- Trees, lawns, landscape, turf

Livestock Areas

- Livestock housing
- Poultry housing
- On/over animal
- Automatic sprayer systems
- On and over animal

Automatic Misting Systems

Greenhouses



Application Methods

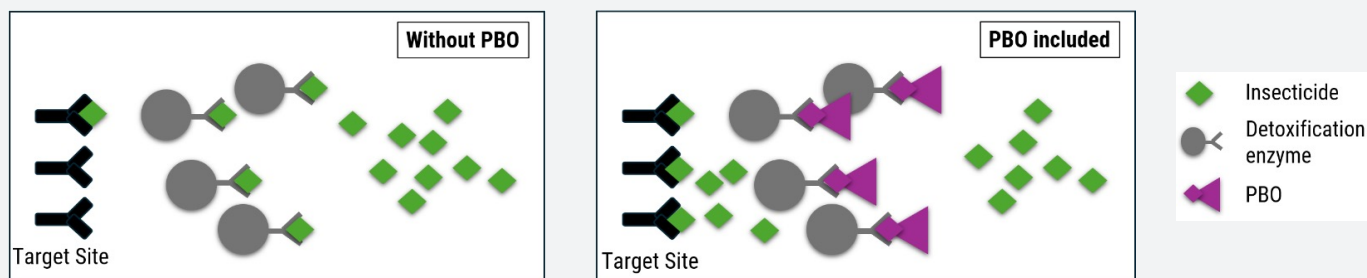
- Broadcast applications
- Foliar sprays
- Space sprays
- Spot, crack & crevice treatments
- Structural perimeter treatments
- Surface sprays
- Void injection

Recommended Equipment

- Handheld or backpack sprayers
- Low-volume injector equipment
- Misting systems
- Power sprayers
- ULV equipment

Piperonyl butoxide (PBO), the active ingredient in Exponent, has been shown in studies to enhance the performance of active ingredients found in the following products:

Bifenthrin 7.9%	Dragnet® SFR	TalstarOne®
Conquer®	Onslaught®	Tempo® SC
Cy-Kick® CS	Premise®	Temprid® SC
Demand® CS	Pyganic® Pro	Transport® GHP
Demon® Max	Suspend® SC	

Piperonyl Butoxide (PBO) Enhances Insecticide Efficacy

For an insecticide to be effective, its active ingredient must reach the target site within the insect. Resistant insects may use cytochrome P450 enzymes to metabolize insecticides before they reach that target. PBO interferes with these detoxification enzymes, allowing more insecticide to reach the target site and helping improve control.

MGK Sustainability in Action

- Containers are HDPE and 100% recyclable
- Shipping cartons and paper labels are sources from Sustainably Managed Forests
- Formulated in a production facility that uses 100% renewable energy

Always read and follow all label instructions. For any medical or safety questions, concerns or incident reports, call 1.888.740.8712.

EPA Registration Number: 1021-1511

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