

HOPGUARD® II

For use in beehives to control Varroa mites (*Varroa destructor*) on honey bees

ACTIVE INGREDIENTS:	BY WEIGHT
Potassium Salts of Hop Beta Acids.....	16.0%
OTHER INGREDIENTS:	84.0%
TOTAL	100.0%



KEEP OUT OF REACH OF CHILDREN

DANGER

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

Danger: Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear appropriate protective eyewear such as goggles, face shield, or safety glasses.

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.

FIRST AID

IF IN EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for 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 further treatment advice.

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 poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-858-7378 for emergency medical treatment

For general information on product use, etc., call the National Pesticides Information Center at 800-858-7378. For emergencies, call the poison control center 1-800-222-1222.

Note to Physician: "Probable mucosal damage may contraindicate the use of gastric lavage". See label back panel for additional precautionary statements.

NET CONTENTS

Each HopGuard® kit contains 24 cardboard strips. Each strip is folded in half and contains 4.0 grams of potassium salts of hop beta acids, and the kit contains 96 grams (3.4 ounces) of potassium salts of hop beta acids.

PERSONAL PROTECTION EQUIPMENT (PPE): Applicators and other handlers must wear appropriate protective eyewear, such as face shield or goggles long sleeved shirt and long pants, waterproof gloves and shoes plus socks.

USER SAFETY RECOMMENDATIONS: Users must:

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

DIRECTIONS FOR USE

Bee Package- Cut strips in half. Strips must be applied at the rate of three-half strips per 2 or 3 lb. package of adult worker bees. Attach three-half strips to the top of package so that the strips are hanging within the package. Place bees in the package after the strips are attached. The bees should remain in contact with the strips for at least 48 hours.

Colony- Strips must be applied at the rate of one strip per five deep combs covered with bees in each brood super or for example two strips per ten frame brood super (chamber) when all combs are covered with bees. Strips are to be placed only in the brood chamber (not in the honey super). Folded strips must be opened and hung over one of the center brood frames near the middle of the frame with one-half of the strip on each side of the frame. If using a second strip, apply it to an adjacent center frame about four inches away from the first strip. Strips must be placed hanging between frames, and within the colony cluster, and not laid on top of the frames. Do not lay the strips on top of the frames. Leave strips in the colony for 30 days. Retreat as necessary, up to 3 times per year.

A maximum of three applications per year (6 strips or approximately 24 grams of potassium salts of hop beta acids) per ten frame brood super (chamber) is allowed. This limit includes all applications to the package(if applicable) and to the colony. Application timing (usually during spring, summer, and fall) should be based on levels of Varroa mite observed in the colony. Users must not take honey and wax from the brood chambers, only from the honey supers. For optimal results, apply HopGuard® II when little to no brood is present in the hive.

RESISTANCE MANAGEMENT

Varroa mite populations can become resistant to pesticides. Resistance development is affected by both the frequency of application and rate/dose of application. After an application, the more susceptible pests die and the less susceptible ones survive, mate with other survivors, and reproduce. Most of the ensuing offspring inherit the parental resistance. Additional applications continue to kill only the remaining, unsusceptible individuals. Continued reliance on a single class of miticide or miticide with the same mode of action will select for resistant individuals which will dominate the mite population in subsequent generations. In order to prevent resistance development and to maintain the usefulness of individual pesticides the adoption of an appropriate resistance management strategy is vital. The Mode of Action (MOA) for hop beta acids is undefined at this time; however, it may cause death by asphyxiation by penetration of the pest's thin exoskeleton.

To delay resistance:

- When possible, rotate the use of miticides to reduce selection pressure as compared to repeatedly using the same product, mode of action or chemical class. If multiple applications are required, use a different mode of action each time before returning to a previously-used one.
- Base miticide use on Integrated Pest Management (IPM). This includes proper pest identification, monitoring for locality, specific economic threshold and economic injury levels, record keeping, and utilizing all available control

practices (cultural, biological and chemical).

- Maximize efficacy by following all label instructions including dosage and timing of application.
- Continually monitor treated populations for development of miticide resistance and report suspected resistance to local extension specialists.
- Contact your local extension specialist for additional pesticide resistance/management recommendations and/or IPM recommendations for your specific location.
- For further information or to report suspected resistance contact your local extension specialist.
- Remove strips if still in hive after 30 days.

RESTRICTIONS

- For in-hive use only.
- Maximum rate = 2 strips per brood chamber per application (i.e. one strip per five frames covered with bees).
- Remove remaining strip(s) after 30 days.
- Do not use HopGuard® II more than 3 times per year.

STORAGE AND DISPOSAL

Unused strips should be stored in a tightly sealed, cool, dark area. Unused, unregistered product must either be returned to the manufacturer or distributor in unopened containers or disposed of in accordance with the Resource Conservation Recovery Act.

