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HERCON® DISRUPT BIO-FLAKE® VBN BARK BEETLE ANTI-AGGREGANT FLAKES

HERCON DISRUPT BIO-FLAKE® VBN is a controlled-release pheromone formulation designed to lower the incidence of certain bark beetle attacks on individual trees or tree stands. The anti-aggregation pheromone, verbenone, is contained in biodegradable flakes that permit rapid aerial or ground application using suitable application equipment. This product is for non-food crop use only.

ACTIVE INGREDIENT:		
4,6,6-trimethyl-bicyclo (3.1.1) hept-3-en-2-one..	10.00%*	
OTHER INGREDIENTS	90.00%	
TOTAL	100.00%	

CONTENTS:

MINIMUM NET WEIGHT: 15.0 KG [33 lb]*

* 15 kg [33 lb] of product will treat 10 acres at 150 g A.I. per acre or 100 trees of 12-inch (30 cm) diameter at breast height (DBH) at 15 g A.I. per tree

BATCH CODE _____

KEEP OUT OF REACH OF CHILDREN

CAUTION CUIDADO

Read Directions and Precautionary Statements Before Use

• Call a poison control center or doctor immediately 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 emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time (NPIC Web site: www.npic.orst.edu). After 4:30 pm call your poison control center at 1-800-222-1222.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION: Harmful if swallowed, absorbed through skin, or inhaled. Causes moderate eye and skin irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes and clothing. Avoid breathing vapor. Wear protective eyewear and chemical resistant gloves. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash before reuse.

Personal Protective Equipment (PPE): Applicators and handlers must wear long-sleeved shirt and long pants, socks, shoes, chemical resistant gloves, and protective eyewear. Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Users should remove clothing/PPE immediately if pesticide gets inside, then wash thoroughly and put on clean clothing.

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.

ENVIRONMENTAL HAZARDS: For terrestrial uses: Except under the forest canopy, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Spray valves must be shut off when passing over surface water not under the forest canopy. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

FIRST AID:
IF ON SKIN:
<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 immediately for treatment advice.
IF IN EYES:
<ul style="list-style-type: none"> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing. Call a poison control center or doctor immediately for treatment advice.
IF SWALLOWED:
<ul style="list-style-type: none"> 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 by a poison control center or doctor. Do not give anything to an unconscious person.
IF INHALED:
<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible.

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 State or Tribal agency responsible for pesticide regulations.

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 the label about personal protective equipment (PPE) and the restricted entry interval and notification to workers (as applicable). Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected workers or handlers may be in the area during application. The requirements in this box apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow any worker entry into treated areas during the restricted entry interval (REI of 4 hours). 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 plants, soil, water, wear: coveralls, chemical resistant gloves, shoes plus socks and protective eyewear.

APPLICATION: This product is an effective management tool for certain bark beetles on pine. The active ingredient, 4,6,6-trimethyl-bicyclo-(3,1,1)-hept-3-en-2-one, verbenone, is an anti-aggregation pheromone that can protect susceptible host trees when applied in the BIO-FLAKE form. Use on tree stands containing lodgepole pine (*Pinus contorta*), ponderosa pine (*P. ponderosa*), whitebark pine (*P. albicaulis*), loblolly pine and other pines that are hosts to certain bark beetles such as mountain pine beetle (*Dendroctonus ponderosae*), red turpentine beetle (*D. valens*), and three ambrosia beetle species (*Xylosandrus compactus*, *X. crassiusculus* and *X. saxoseni*).

Tree Stands: Apply once per season using approved method appropriate for size of area to be treated (see below) at rate of 3.3 to 11 lb (1.5 to 5 kg) of DISRUPT BIO-FLAKE® VBN (equivalent to 0.33 to 1.1 lb [150 to 500 gm] of active ingredient) per acre. Use in areas such as forest, suburban, municipal and shade tree areas, recreational areas such as campgrounds, golf courses, parks and parkways; ornamental, shade tree forest plantings; shelter belts and rights of way, and other easements. To ensure proper rate and method of application, make application by or under the supervision of a qualified person.

Individual Trees: Apply once per season using approved method (see below) to trunks of individual trees to a height of 22 feet (7 meters) at rate of 150 gm product (15 gm active ingredient) per 12 inches (30 cm) of trunk diameter at breast height (DBH). To assure flakes are retained on tree trunk, apply as a mixture containing DISRUPT BIO-FLAKE® VBN, an inert sticker such as MICRO-TAC®, a thickener such as MICRO-THIC™, and water (see below).

METHOD OF APPLICATION: Do not open product bags until ready to use. Do not use DISRUPT BIO-FLAKE VBN from damaged, punctured or unsealed bags.

Apply this product only using Hercon approved modified ground or aerial equipment as follows: For individual tree application use Hercon PODDS™ hand-held applicator or modified hydroseeder; for small area ground application use hand-held fertilizer spreader or modified blower such as the Hercon TURBO-TAC™ Applicator mounted on an ATV; for aerial application to large areas use Hercon Aerial Pod System for fixed-winged aircraft or suitably calibrated fertilizer spreader for suitable for fixed winged or helicopter aircraft. Do not allow drift from application site to contact non-target crops.

Monitor for infestations using Lindgren Funnel Trap and appropriate beetle attractants and by visual inspection.

Individual Tree Application:

For application using the hand-held Hercon PODDS™ (Pheromone On Demand Delivery System), prepare a uniform suspension of DISRUPT BIO-FLAKE® VBN in an approved sticker such as MICRO-TAC™ III as follows:

1. Add 1 lb (454 gm) of DISRUPT BIO-FLAKE VBN to 1 quart of an approved sticker such as MICRO-TAC™ III and mix until product is uniformly suspended throughout mixture. This mix contains 33% DISRUPT BIO-FLAKE VBN by weight.
2. Place mixture in reservoir bottle of the PODDS, attach bottle to the PODDS gun, and then attach the hose from the regulator on the compressed air or CO₂ cylinder to the PODDS gun.
3. Calibrate the PODDS to deliver the amount of mixture desired per "shot" by adjusting the cocking slider stop and locking in position.
4. Apply to each tree trunk to achieve rate of 0.33 lb (150 gm) of DISRUPT BIO-FLAKE VBN (equivalent to 15 gm active ingredient) for each 12 inches (30 cm) DBH.

For application by modified hydroseeder, prepare a uniform suspension of DISRUPT BIO-FLAKE® VBN in a tank-mix containing water, approved sticker such as MICRO-TAC™, and approved thickening agent such as MICRO-THIC™ as described below. Apply a 12 inch (30 cm) strip to height of 22 feet (7 meters) on a single side of the tree trunk at the rate of 150 gm of product (15 gm ai) per 12 inches (30 cm) of diameter at breast height (DBH).

To prepare 100 gallon tank-mix to treat 33 trees (if each at 12 inches DBH):

1. Add 60 gallons of clean water to the hydroseeder mix tank.
2. With water vigorously mixing or recirculating, very slowly add 8 lb MICRO-THIC to vortex to form uniform mixture taking care not to form lumps.
3. Continue mixing and slowly add 12 gallons of MICRO-TAC until uniformly mixed.

4. Continue mixing and slowly add 11 lb of DISRUPT BIO-FLAKE VBN until uniformly distributed in mix.
5. Top up water to 100 gallon mark if necessary and continue mixing or recirculating until thickening develops to the point that flakes stay in suspension without apparent settling. Do not allow mix to "over-thicken" by allowing mixer to run for prolonged periods past this point prior to applying.
6. Apply to each tree trunk as a long vertical stripe at a rate of 3 gal (11.4 L) of mix per 12 inches (30 cm) DBH.

Ground Application: Apply DISRUPT BIO-FLAKE® VBN at label rate without sticker using a suitable hand-held fertilizer spreader or with or without sticker using a modified blower such as the Hercon TURBO-TAC Applicator mounted on an ATV or other suitable vehicle.

Aerial Application: Place DISRUPT BIO-FLAKE® VBN in the appropriate hoppers mounted on the plane or helicopter. Spread DISRUPT BIO-FLAKE® VBN at label rate into tree canopy allowing the product to fall down and through top of trees. DISRUPT BIO-FLAKE VBN® can be applied with or without a sticker depending on the area and stand classification.

STORAGE AND DISPOSAL:

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

PESTICIDE STORAGE: Store in sealed containers in a cool dry place.

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

CONTAINER DISPOSAL: Plastic bag: Non-refillable container. Do not refill or reuse this container. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned stay out of smoke. **Cardboard Box [when used as outer packaging]** Non-refillable container. Do not refill or reuse this container.

Dispose of outside cardboard box in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned stay out of smoke.

Metal drums: [when used as outer packaging] Non-refillable container. Do not refill or reuse this container. Offer for recycling or reconditioning, or dispose of in sanitary landfill, or by other procedures approved by state and local authorities as long as none of the bags containing product have broken while in the drum. If bags have broken, triple rinse the drum and then offer for recycling or reconditioning, or dispose of in sanitary landfill.

WARRANTY AND LIMITATION OF DAMAGES

Hercon Environmental 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 for Use under normal conditions of use to the extent allowed by state law. Hercon neither makes, nor authorizes any agent or representative to make any other warranty of fitness or of merchantability, guarantee or representation, expressed or implied concerning this material except as stated above. This warranty does not extend to the use of this product contrary to the label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Hercon Environmental. If this product is defective, Buyer's exclusive remedy shall be the replacement of the product, or if replacement is impracticable as determined by Hercon, refund of the purchase price. To the extent allowable by law, Hercon's maximum liability for breach of this warranty shall not exceed the purchase price of this product. In no case will Hercon be liable for incidental, consequential or special damages resulting from handling, storage, use, misuse or abuse of this product.

Made in the USA by:

HERCON ENVIRONMENTAL
Emigsville, PA 17318-0435

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EPA Est. No. 8730-PA-01

Questions? Call Toll-Free: 1-866-4-HERCON

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ACCEPTED

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Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for
the pesticide registered under
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