

Fact sheet

HERCON® DISRUPT® II Gypsy Moth Mating Disruptant

EPA Reg. No. 8730-55
Controlled Release Dispenser for the Gypsy Moth Pheromone

WHAT IS IT?

Hercon's Disrupt II is a synthetic insect pheromone product used to control low-density populations of the gypsy moth (*Lymantria dispar*). It is target specific meaning Disrupt II affects only the gypsy moth. Disrupt II works by interfering with the chemical communications between the male and female adult moths. It is not a poison that will kill the gypsy moth when applied; instead it hides or "masks" chemical trails emitted by the female moth to attract males for mating. When the product is aerially applied the tiny 1/32" x 3/32" flakes slowly emit the pheromone over several months. The released pheromone permeates the treated area, covering up the natural pheromone trails produced by the female gypsy moth. This disrupts the normal communication between the male and female moths, reduces or prevents mating and reduces or eliminates the subsequent years' population.

COMPONENTS

Disrupt II is made from four main components: disparlure (the gypsy moth pheromone and active ingredient), polyvinyl chloride films, polyvinyl chloride resin and a plasticizer. This is how the product is put together:

Disrupt II is a three-layered laminate consisting of two outside barrier films, and a middle reservoir layer containing the disparlure. The films control the release rate of the pheromone as it migrates up through the reservoir to the top of the films. The reservoir layer consists of the pheromone, resin and plasticizer. The resin and plasticizer create a polymer matrix that protects the pheromone from environmental degradation and rapid evaporation. This construction insures that the pheromone is released at a controlled rate over a period of 3 to 4 months and explains why the product is called a controlled-release dispenser.

TOXICITY

The components found in Disrupt II all have low toxicity. It is classified as a 'low risk' pesticide by the U.S. Environmental Protection Agency. Ecological toxicity studies indicate that Disrupt II is practically non-toxic to birds, mammals, fish and *Daphnia* (a sensitive aquatic invertebrate). Both the resin and the PVC films are essentially inert and pose no threat to the environment at the labeled application rate.

APPLICATION RATES

Rates up to 170 grams of Disrupt II per acre (30.4 grams active ingredient per acre) are labeled but in operational treatments the rate of 34 or 85 grams of Disrupt II, combined with 0.6 to 1.5 to fluid ounces of a sticking agent respectively, is usually applied per acre. This is equivalent to deposits of approximately 1 or 2 sticker-coated flakes per square foot.