



OHIO DEPARTMENT OF AGRICULTURE GYPSY MOTH PROGRAM

Division of Plant Industry, Plant Pest Control Section
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<http://www.agri.ohio.gov/divs/plant/gypsy/gypsy-index.aspx>



SPLAT - Pheromone Fact Sheet

A Toxin-Free Formulation for the Sustained Release of Pheromone to Manage Gypsy Moth (Lymantria dispar) Infestations Through Mating Disruption

What is SPLAT GM?

SPLAT has the consistency of a hand cream when it is applied and it hardens when it dries. A few hours after it is applied, the dry SPLAT is similar to the wax in candles or crayons. SPLAT is made from a mixture of water, wax, and vegetable oils. It also contains preservatives and emulsifiers which are the same ingredients used in skin care products. When the gypsy moth sex pheromone is added to SPLAT and the mixture is applied in the field, gypsy moth mating is disrupted and the pest population is reduced. SPLAT is the base of SPLAT GM, the added gypsy moth (GM) pheromone is called the active ingredient (AI).

What Are Pheromones?

A pheromone is a chemical signal that occurs in nature and resembles a scent. The sex pheromone of gypsy moth is called "disparlure". When female gypsy moths release disparlure, male moths follow the pheromone trail to find the females, and mating occurs. The disparlure used in SPLAT GM is a chemical copy of the gypsy moth sex pheromone that occurs in nature.

What Is Mating Disruption?

When SPLAT GM is applied in the field, every droplet releases a small amount of pheromone, just like a female gypsy moth would. There are so many point sources of pheromone in the field created by the droplets of SPLAT GM, that the male moths cannot find the real females and they are not able to reproduce. If most adult moths are not mated, then fewer larvae (caterpillars) will be present to cause damage to the leaves on trees. This means that the population of gypsy moth is significantly reduced in the area where SPLAT GM is applied.

How Will SPLAT GM Be Applied?

SPLAT GM is almost always applied aerially. Airplanes or helicopters flying 100 to 200 feet above treetops will spray SPLAT GM over areas where gypsy moth control is desired.

How Much SPLAT and Pheromone Will Be Used?

The amount of SPLAT GM used will depend on how dense the population of gypsy moth is and on how long control is desired. On average, 46 grams of SPLAT GM containing 6 grams of gypsy moth pheromone is used on one acre of forest for the whole season. In this case, the application dose is 6 grams of active ingredient per acre. This is less than three tablespoons of SPLAT GM or one teaspoon of gypsy moth pheromone distributed over an acre. Up to 230 grams of SPLAT GM could be used to manage the more dense infestations of gypsy moth – this would be less than half a soda can of SPLAT GM spread over an acre.

Is SPLAT GM Harmful to Humans?

No, SPLAT GM is not harmful to humans. All of the ingredients in the SPLAT base are listed by the Environmental Protection Agency (EPA) as extremely safe and non-toxic; they have all been

cleared for food use. The other ingredient in SPLAT GM, the gypsy moth pheromone, is a copy of the pheromone that occurs in nature. The amount of pheromone that a person is exposed to in an area sprayed with SPLAT GM is similar to the amount of pheromone that would be present in a naturally occurring area with a dense population of female gypsy moths. When compared to other scents like perfume and flowers in bloom, the amount of pheromone in the air is very small. SPLAT GM does not kill anything, it simply disrupts the mating of adult gypsy moths. SPLAT GM is called a pesticide because it is used to control an insect pest. Soaps, oils, and pheromones must all be registered as pesticides when they are used in this way. The wax that is used in SPLAT GM is the same wax that is used in candles, crayons and chewing gum. The vegetable oil that is used in SPLAT GM is the same that is used for cooking. When SPLAT GM is sprayed over a forest, the droplets fall onto the tree leaves and stick there, where they land, for the whole season. SPLAT GM will not blow around and therefore it is very difficult for a person to inhale the SPLAT, even if he or she is in the area as it is being sprayed. SPLAT has been tested extensively in laboratories and even at very high doses, it has never been shown to be harmful to animals or humans. Pheromones have been used in mating disruption programs for more than 30 years. No medical or health problems have ever been proven to be caused by the use of these pheromones.

Is SPLAT GM Harmful to the Environment?

No, SPLAT GM is not harmful to the environment. After SPLAT GM dries on the tree leaves, it stays there for several months slowly releasing pheromone. The wax and oil protect the pheromone from the sun and rain. Once the hardened droplet finally falls off the tree, or the leaf falls, the soil pulls out the oils and the dry wax crumbles and quickly degrades into the soil. All components of SPLAT GM are biodegradable, especially when applied in such small point sources and anchored to leaves that fall and are broken down by microorganisms on the forest floor.

Is SPLAT GM Organic?

Although all of the ingredients in SPLAT GM are either cleared for food use or generally considered safe, the product is not classified as organic by the EPA. ISCA Technologies, the company that produces SPLAT GM, is pursuing organic classification for this product.

What If SPLAT GM Lands on My Car or Lawn?

If you notice SPLAT droplets on your car, scrubbing with mild detergent and water like you would with road grime should be sufficient. SPLAT GM will not harm the paint on your vehicle. SPLAT GM droplets on lawns will eventually wash off with rain or irrigation. If SPLAT GM happens to rub off on clothing, it can usually be washed out with hot water and laundry detergent. Children and/or pets playing on lawns which have been exposed to an aerial SPLAT GM application will not be exposed to harmful chemicals.