

# **TREES AND SHRUBS BY SOIL DRENCH AND SOIL INJECTION - ADELGIDS, APHIDS, ETC.**

## General Information

SEE INDIVIDUAL SITES FOR SPECIFIC POLLINATOR PROTECTION APPLICATION RESTRICTIONS. IF NONE EXIST UNDER THE SPECIFIC SITE, FOR OUTDOOR FOLIAR APPLICATIONS, FOLLOW THESE APPLICATION DIRECTIONS.

## NON-AGRICULTURAL USES

Do not apply Merit 75 WSP Insecticide while bees are foraging. Do not apply Merit 75 WSP Insecticide to plants that are flowering. Only apply after all flower petals have fallen off.

Use Merit 75 WSP Insecticide as directed for sod farm production and on turfgrass and ornamentals on: residential home lawns, business and office complexes, shopping complexes, multi-family residential complexes, golf courses, airports, cemeteries, parks, playgrounds, and athletic fields.

Merit 75 WSP Insecticide can be used by soil application as directed on trees, shrubs, flowers and groundcovers in sites: in and around the perimeter of industrial and commercial buildings; residential areas; interior plantscapes; municipal, city, state and national forested areas, and private wooded areas.

**RESTRICTION:** Not for use in commercial greenhouses, nurseries, or on grasses grown for seed, or on commercial fruit and nut trees.

## RESISTANCE MANAGEMENT RECOMMENDATIONS

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of this product should conform to resistance management strategies established for the use area.

MERIT 75 WSP Insecticide contains a Group 4A insecticide. Insect biotypes with acquired or inherent resistance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species.

## APPLICATION TO TURFGRASS

Use MERIT 75 WSP Insecticide for the control of soil inhabiting pests of turfgrass, Northern & Southern masked chafers, *Cyclocephala borealis*, *C. immaculata*, and/or *C. lurida*; Asiatic garden beetle, *Maladera castanea*; European chafer, *Rhizotrogus majalis*; Green June beetle, *Cotinis nitida*; May or June beetle, *Phyllophaga* spp.; Japanese beetle, *Popillia japonica*; Oriental beetle, *Anomala orientalis*; Billbugs, *Spherophorus* spp.; Annual bluegrass weevil, *Hyperodes* spp.; Black turfgrass atanius, *Atanius spretulus* and *Aphodius* spp.; European Crane Fly *Tipula paludosa*; and mole crickets, *Scapteriscus* spp. MERIT 75 WSP Insecticide can also be used for the suppression of cutworms and chinchbugs.

The active ingredient in MERIT 75 WSP Insecticide has sufficient residual activity so that applications can be made preceding the egg laying activity of the target pests. High levels of control are achieved when applications are made preceding or during the egg laying period. The need for an application can be based on historical monitoring of the site, previous records or experiences, current season adult trapping or other methods. Optimum control will be achieved when applications are made prior to egg hatch of the target pests, followed by sufficient irrigation or rainfall to move the active ingredient through the thatch.

Do not apply when turfgrass areas are waterlogged or the soil is saturated with water. Adequate distribution of the active ingredient cannot be achieved when these conditions exist.

The treated turf area must be in such a condition that the rainfall or irrigation will penetrate vertically in the soil profile.

**RESTRICTION:** Do not apply more than a total of 8.53 oz (0.4 lb of active ingredient) per acre per year.

#### APPLICATION EQUIPMENT FOR USE ON TURFGRASS

Apply MERIT 75 WSP Insecticide in sufficient water to provide adequate distribution in the treated area. The use of accurately calibrated equipment normally used for the application of turfgrass insecticides is required. Use equipment, which will produce a uniform, coarse droplet spray, using a low-pressure setting to eliminate off target drift. Check calibration periodically to ensure that equipment is working properly.

#### APPLICATION TO ORNAMENTALS

MERIT 75 WSP Insecticide is for use on ornamentals in commercial and residential

landscapes and interior plantscapes. MERIT 75 WSP Insecticide is a systemic product and will be translocated upward into the plant system from root uptake. To assure optimum effectiveness, the product must be placed where the growing portion of the target plant can absorb the active ingredient. The addition of a nitrogen containing fertilizer, where applicable, into the solution may enhance the uptake of the active ingredient. Application can be made by foliar application or soil applications; including soil injection, drenches, and broadcast sprays. Foliar applications offer locally systemic activity against insect pests.

When making soil applications to plants with woody stems, systemic activity will be delayed until the active ingredient is translocated throughout the plant. In some cases, this translocation delay could take 60 days or longer. For this reason, make application prior to anticipated pest infestation to achieve optimum levels of control.

**RESTRICTION:** Outdoor applications cannot exceed a total of 8.53 oz (0.4 lb of active ingredient) per acre per year.

#### ANT MANAGEMENT PROGRAMS

Use MERIT 75 WSP Insecticide to control aphids, scale insects, mealybugs and other listed sucking pests on ornamentals to limit the honeydew available as a food source for ant populations.

MERIT 75 WSP Insecticide applications can be supplemented with residual sprays, bait placements or other ant control tactics to further reduce the pest population.

#### APPLICATION EQUIPMENT FOR FOLIAR APPLICATIONS

MERIT 75 WSP Insecticide mixes readily with water and may be used in many types of application equipment. Mix product with the required amount of water and apply as desired dependent upon the selected use pattern.

When making foliar applications on hard to wet foliage such as holly, pine, or ivy, the addition of a spreader/sticker is recommended. If concentrate or mist type spray equipment is used, apply an equivalent amount of product on the area sprayed, as would be used in a dilute application.

**MIXING:** Within each container are clear inner packets containing MERIT 75 WSP Insecticide. The clear inner packet is water-soluble. Do not allow packets to become wet prior to adding to the spray tank. Do not handle the clear inner packets with wet hands or wet gloves. Rough handling may cause breakage. Reseal container to

protect remaining packets.

To prepare the spray mixture, drop the required number of unopened clear water-soluble packets, as determined in the application rate chart, into the spray tank while filling with water to the desired level. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the packets should be completely dissolved within a few minutes from the time they are added to the water. Cooler water temperatures increase the time needed for the inner packet to dissolve completely.

**RESTRICTION:** Do not use MERIT 75 WSP Insecticide packets in a tank-mix with products that contain Boron or release free chlorine. The resultant reaction of PVA and boron or free chlorine is a plastic, which is not soluble in water or solvents such as diesel oils, kerosene, gasoline, or alcohol. Do not attempt to use the WSP packets directly in diesel oils or summer spray type oils as in ULV or LV uses. PVA packets are water-soluble not oil soluble. Use of chlorinated water is acceptable.

MERIT 75 WSP Insecticide has been found to be compatible with commonly used fungicides, miticides, liquid fertilizers, and other commonly used insecticides. Check physical compatibility using the correct proportion of products in a small jar test if local experience is unavailable.

**RESTRICTION:** Do not apply through any irrigation system.

Limitations, Restrictions, and Exceptions

#### DIRECTIONS FOR APPLICATION TO TREES AND SHRUBS BY SOIL DRENCH AND SOIL INJECTION

For use in and around the perimeter of industrial and commercial buildings, in residential and recreational areas, and in municipal, city, state, national, and private wooded and forested areas.

Example equation:  $[x \text{ (total DBH inches of a tree)} / y \text{ (cumulative trunk diameter rate to be applied)}] * 1.6 \text{ oz (1 packet)} = \text{total oz of product per tree.}$

Examples of single tree calculations:

To calculate the rate range with a 12 inch DBH tree:

$(12/48) * 1.6 \text{ oz (1 packet)} = 0.4 \text{ oz per tree}$

$(12/24) * 1.6 \text{ oz (1 packet)} = 0.8 \text{ oz per tree}$

If treating multiple trees at a similar rate, add the DBH of the trees together and divide by rate to be applied.

Example of multiple trees using similar rate of 48 (y): 3 trees with DBH of 8, 10, & 9 inches. Total cumulative inches of DBH is 27 (x).

$(27/48) * 1.6 \text{ oz (1 packet)} = 0.9 \text{ oz total for all three trees.}$

Soil Injection: GRID SYSTEM: Space holes on 2.5 foot centers, in a grid pattern, extending to the drip line of the tree. CIRCLE SYSTEM: Apply in holes evenly spaced in circles, (use more than one circle dependent upon the size of the tree) beneath the drip line of the tree extending in from that line. BASAL SYSTEM: Space injection holes evenly around the base of the tree trunk no more than 6 to 12 inches out from the base.

Mix required dosage in sufficient water to inject an equal amount of solution in each hole. Maintain a low pressure and use sufficient solution for distribution of the liquid into the treatment zone. For optimum control, keep the treated area moist for 7 to 10 days. Do not use less than 4 holes per tree or shrub.

Soil Drench: Uniformly apply the dosage in no less than 10 gallons of water per 1000 square feet as a drench around the base of the tree, directed to the root zone. Remove plastic or any other barrier that will stop solution from reaching the root zone.

For Control of Specified Borers: Application to trees already heavily infested may not prevent the eventual loss of the trees due to existing pest damage and tree stress.

#### RESTRICTIONS:

- No Soil Injection Applications Allowed in Nassau or Suffolk Counties of New York.
- Do not apply more than 8.53 oz (0.4 lb active ingredient) per acre per year.
- Keep children and pets off treated area until dry.
- Do not apply Merit 75 WSP Insecticide to areas which are water logged or saturated, which will not allow penetration into the root zone of the plant.
- Do not apply this product, by any application method, to linden, basswood, or other Tilia species.

Method

[Soil Injection](#)

[Soil Drench](#)

## Restricted Entry Interval

12 hours

Exception: If the product is applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Timings

[Prior to anticipated pest infestation.](#)