

# REFORM

An Emulsifiable Concentrate containing 8 lbs. of Piperonyl Butoxide Technical per gallon.

## ACTIVE INGREDIENT:

Piperonyl Butoxide\* ..... 91.3%

OTHER INGREDIENTS: ..... 8.7%

TOTAL: ..... 100.0%

\*(butylcarbityl)(6-propylpiperonyl) ether and related compounds.

## KEEP OUT OF REACH OF CHILDREN CAUTION

See inside label booklet for additional PRECAUTIONARY  
STATEMENTS.

EPA Reg. No.: 89459-33-34704

EPA Est. No.: 2724-TX-1

Net Contents: 2.5 gal (9.46 L)

L010516-040324v2

### Manufactured for:

LOVELAND PRODUCTS, INC.®, P.O. BOX 1286,  
GREELEY, COLORADO 80632-1286

300535978



### FIRST AID

<b>If on skin or clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give anything by mouth to an unconscious or convulsing person.</li></ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>

### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-944-8565 for emergency medical treatment information.

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wear long-sleeved shirt and long pants, socks and shoes and chemical resistant gloves (such as Barrier Laminate, Butyl Rubber, Nitrile Rubber, Neoprene Rubber, Polyvinyl Chloride or Viton (Selection Category C).

#### **Personal Protective Equipment (PPE):**

Mixers, loaders, applicators and other handlers must wear the following: long sleeved shirt and long pants, shoes and socks and chemical resistant gloves.

In addition to the above PPE, mixers and loaders supporting aerial applications to forests and/or applicators using a high pressure hand wand in an enclosed area must wear at least a NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any N, R, P or HE filter.

In addition to the above PPE, applicators using hand held foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with a dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a cartridge or canister with any N, R, P or HE filter.

See Engineering Controls for additional requirements.

**User Safety Requirements:** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

**Engineering Controls:** Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

#### **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

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and run-off may be hazardous to aquatic organisms in water adjacent to treated areas. This product has the potential to contaminate water through run-off. This product has a potential for run-off for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce run-off that contains this product.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

### PHYSICAL OR CHEMICAL HAZARDS

Do not store near heat or open flame.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

### USE RESTRICTIONS

This product is an emulsifiable concentrate for use as an additive in insecticides and acaricides to improve control of insects and mites. This product aids in reducing oxidative resistance that can develop in insects and mites. This product has no insecticidal effect of its own.

- Apply this product only as specified on this label.
- Do not contaminate food or feedstuffs.
- Do not use in aircraft cabins.
- Do not wet plants to point of run-off or drip.
- Do not apply this product directly into sewers or drains, or to any area like a gutter where drainage to storm sewers, storm drains, water bodies, or aquatic habitat can occur. Do not allow this product to enter any drain during or after application.
- Do not make applications when heavy rain is expected or during rain.
- Not for use in outdoor residential misting systems.
- Do not remain in treated area. Exit area immediately and remain outside the treated area until aerosols, vapors and/or mists have dispersed.
- Remove or cover exposed food and drinking water before application. Remove or cover dishes, utensils, food processing equipment and food preparation surfaces, or wash them before use.
- For agricultural premises, commercial animal housing and equipment, direct application to non-domestic animals/livestock, greenhouse grown ornamental, flowering and foliage plants and outdoor ornamentals and lawns: Do not apply more than 1 time per day.
- For food crops grown outdoors or in greenhouses in agricultural settings: Do not apply more than 10 times per season. Do not reapply within 3 days except under extreme pest pressure. In case of extreme pest pressure, do not reapply within 24 hours. Do not apply to cotton within 14 days of seed harvest.
- For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### 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 this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours. PPE required for 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, or water, is: coveralls, chemical resistant gloves, such as barrier laminate, or butyl rubber, or nitrile rubber, or neoprene rubber, or PVC, or viton, and shoes plus socks.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

For surface spray use: Except when applying to livestock, dairy and poultry animals, do not enter or allow others to enter treated area until sprays have dried.

For space spray use: Do not enter or allow others to enter until vapors, mists, or aerosols have dispersed and the treated area has been thoroughly ventilated.

**TANK MIXES:** Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator, and/or application advisor. Read and follow the most restrictive label instructions and precautions of all products in a tank mix.

#### **APPLICATION INSTRUCTIONS**

This product may be applied using ground equipment sprayers, hand-held sprayers, power sprayers, foggers, ULV applicators, or by chemigation. Not for use in outdoor residential misting systems.

#### **SPRAY DRIFT MANAGEMENT**

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interactions of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

##### **Aerial Applications**

Do not apply at wind speeds greater than 10 mph at the application site. Do not make any type of application into temperature inversions. Apply as a medium or coarser spray (ASABE Standard 572). Do not release spray at a height greater than 10 feet above the ground or crop canopy. Boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter. Aerial applicators must consider airspeed and nozzle orientation in determining droplet size. When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this downwind displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

##### **Ground Applications**

Do not release spray at a height greater than 4 feet above ground or crop canopy.

##### **Airblast Applications**

Direct spray into the canopy. Turn off outward-pointing nozzles when spraying row ends, and when spraying outer rows.

Use this product as an additive to insecticides or acaricides applied according to label directions on growing food, feed, or seed crops outdoors, or in greenhouses, or on dormant crops.

### **CROPS**

#### **RESTRICTIONS FOR USE ON FOOD CROPS:**

##### **Maximum application rates:**

- Field and orchard – 0.5 lbs ai/acre or 0.012 lb ai/1,000 square feet
- Hydroponically grown crops – 1.0 ppm ai in water
- Greenhouse space sprays – 0.0014 lbs ai/1,000 cubic feet
- Greenhouse surface spray – 0.012 lbs per 1,000 square feet or 0.5 lbs ai per acre.

##### **ROOT AND TUBER VEGETABLES**

Arracacha, arrowroot, purple arrowroot, Japanese artichoke, Jerusalem artichoke, beets, sugarbeets, edible burdock, carrot, cassava (bitter or sweet), celeriac, chervil (turnip, rooted), chicory, dasheen, (taro), ginger, ginseng, horse radish, leren, parsley (turnip rooted), parsnip, potatoes, radish, Japanese radish (daikon), rutabaga, salsify, black salsify, Spanish salsify, sweet potatoes, taniar (cocoyam), turmeric, turnip, true yams, bean yams.

##### **LEAVES OF ROOT AND TUBER VEGETABLES**

Beets, sugarbeets, edible burdock, carrot, cassava (bitter or sweet), celeriac, chervil (turnip rooted), chicory, dasheen (taro), parsnip, radish, Japanese radish (daikon), rutabaga, black salsify, sweet potatoes, taniar (cocoyam), turnip, true yam.

##### **BULB VEGETABLES (*Allium* spp.)**

Garlic, great-headed garlic, leek, onion (dry bulb or green), spring onion (scallions), Welsh onion, shallots.

##### **LEAFY VEGETABLES**

Amaranth (leafy amaranth, Chinese spinach, tampala), arugula (rocket), celery, celtuce, chervil, corn salad, chrysanthemum (edible leaved), chrysanthemum (garland), cress (garden), cress (upland, yellow rocket, winter cress), dandelion, dock (sorrel), endive, escarole, fennel (Florence), lettuce (head and leaf), orach, parsley, purslane (garden and winter), rhubarb, romaine, spinach, fine spinach (Malabar, Ceylon), spinach (New Zealand), Swiss chard.

### **BRASSICA (COLE) LEAFY VEGETABLES**

Broccoli, broccoflower, cavaloibroccolo, Chinese broccoli (gailan), broccoli raab (rapini), Brussels sprouts, cabbage, Chinese cabbage (bokchoy), Chinese cabbage (napa), Chinese mustard cabbage (gaichoy), cauliflower, collards, kale, kohlrabi, mizuna, mustard greens, mustard spinach, rape greens.

### **LEGUME VEGETABLES (SUCCULENT OR DRIED)**

Adzuki beans, asparagus beans, black-eyed peas, broad beans (fava beans), catjang, chick peas (garbanzo beans), Chinese long-beans, cowpeas, crowder peas, field beans, guar, jackbeans, sword beans, kidney beans, lablab beans (hyacinth beans), Lima beans, lentils, moth beans, mung beans, navy beans, peas (dwarf, edible, pod, English, garden green, field, snowpeas, sugar snap peas), pigeon peas, pinto beans, rice beans, runner beans, snap peas, southern peas, soybeans, grain lupin, sweet lupin, white lupin, pole beans, tepary beans, urd beans, wax beans, yardlong beans.

### **LEGUME VEGETABLE FOLIAGE**

Plant part of any legume vegetables included in the legume vegetable group that will be used as animal feed, including any variety of beans and field peas.

### **FRUITING VEGETABLES**

Eggplant, ground cherry, pepinos, peppers (bell, chili, cooking, pimento, sweet peppers), tomatillo, tomatoes.

### **CUCURBIT VEGETABLES**

Balsam pear (bitter melon), Chinese waxgourd (Chinese preserving melon), citron melon, cucumber, gherkins, edible gourds, melons (hybrids, ananas, canary, cantaloupe, casaba, charentais, Crenshaw, galia, honeydew, honeyballs, mangomelon, muskmelon, Persian melon, piel de sapo), pumpkin, squash (summer and winter), western shipper melon, watermelon (including hybrids, seeded and unseeded.)

### **CITRUS FRUITS**

Calamondin, citrus citron, citrus hybrids, grapefruit, kumquats, lemons, limes, mandarins, tangerines, orange (sweet and sour), pummelo, satsuma mandarins.

### **POME FRUITS**

Apple, crabapple, loquat, mayhaw, pear, oriental pear, quince.

### **STONE FRUITS**

Apricot, cherries (sweet and sour), nectarines, peaches, plums, prunes, Chickasaw plums, Damson plums, Japanese plums, plumcot.

### **SMALL FRUITS AND BERRIES**

Bingleberries, blackberries, blueberries, cranberries, currants, dewberries, elderberries, gooseberries, grapes, huckleberries, loganberries, lowberries, ollalieberies, black raspberries, red raspberries, strawberries, youngberries.

### **TREE NUTS**

Almond, beech nut, Brazil nut, butternut, cashew, chestnut, chinquaoín, filbert (hazelnut), hickory nut, macadamia nut (bush nut), pecan, pistachio, walnut (black and English or Persian).

### **ORIENTAL VEGETABLES**

Japanese artichoke, Chinese broccoli (gailan), Chinese cabbage (bokchoy), Chinese mustard cabbage (gaichoy), dasheen, ginger, ginseng, Chinese longbeans, mung beans, citron melon, balsam pear (bitter melon), Japanese radish (daikon), Chinese spinach, Chinese waxgourd.

### **SUBTROPICAL FRUITS**

Avocado, banana, carob, Barbados cherry, cherimoya, dates, durian (jackfruit), feijoa, figs, guava, kiwifruit, lychee, mango, papaya, passionfruit, pawpaw, persimmon, pineapple, pomegranate.

### **CEREAL GRAINS**

Barley, buckwheat, corn (sweet, pop and field), millet, proso, oats, pearl, rice, rye, sorghum (milo), teosinte, triticale, wheat, wild rice.

#### **FORAGE, FODDER AND STRAW OF CEREAL GRAINS**

Barley, buckwheat, corn (sweet, pop and field), millet, proso, oats, pearl, rice, rye, sorghum (milo), teosinte, triticale, wheat, wild rice.

#### **GRASSES FOR SEED, FORAGE, FODDER AND HAY**

Includes any grass (graminaceae), green or cured, except sugarcane and those listed under "cereal grains", that will be used to graze or feed livestock, such as pasture grasses, range grasses, grasses grown for hay or silage, Bermuda grass, bluegrass, bromegrass, fescue, annual ryegrass, festulolium, hybrid ryegrass, Italian ryegrass, meadow fescue, orchard grass, Sudangrass, sorghum-Sudan, tall fescue, timothy, wheat hay, turfgrasses, bentgrass, Kentucky bluegrass, specialty grasses.

#### **NON-GRASS ANIMAL FEEDS**

Alfalfa, velvet bean, clover, kudzu, lespedeza, lupin, Sainfoin, trefoil, crown vetch, milk vetch.

#### **HERBS AND SPICES**

Allspice, angelica, anise (anise seed), annatto, balm, basil, borage, burnet, chamomile, caper buds, caraway, black caraway, cardamom, cassia bark, cassia buds, catnip, celery seed, chervil, chives, Chinese chives, clary, cove buds, coriander (cilantro or Chinese parsley), coriander (cilantro) seed, costmary, cilantro, cumin, curry leaf, dill (weed, seed), fennel (Italian and sweet), fenugreek, grains of paradise, horehound, hyssop, juniper berry, lavender, lemongrass, lovage (leaf and seed), lace, marigold, marjoram (sweet, wild), mustard (seed), nasturtium, nutmeg, oregano, mint, paprika, parsley, pennyroyal, pepper (white or black), poppyseed, rosemary, rue, saffron, sage savory (including summer or winter), sweet bay (bay leaf), tansy, tarragon, thyme, vanilla, watercress, wintergreen, woodruff, wormwood.

#### **OILSEED CROPS**

Canola, crambe, rapeseed, flax safflower, sesame, soybeans, sunflowers.

#### **ADDITIONAL CROPS**

Artichoke, asparagus, avocado, coffee, cotton, hemp, hops, jojoba, mushrooms, olives, okra, peanuts, safflower, sesame, sugar cane, sunflowers, tea, tobacco.

#### **ORNAMENTALS**

##### **Flowering Plants**

African violets, ageratum, aster, azalea, begonia, cactus, calceolaria, calendula, calla, camellia, carnation, ceanothus, Christmas trees, conifer plantations, conifer seed orchards, cineraria, chrysanthemum, coleus, cyclamen, cypress, daffodil, dahlia, delphinium, dogwood, fern, ficus, foliage plants, forest tree nurseries, palm and tropical tree nurseries, fuschia, gardenia, geranium, gladiolus, gloxinia, gypsophila, holly hyacinth, hydrangea, iris, juniper, lily, maidenhair fern, marigold, narcissus, palm, pansy, pelargonium, peony, petunia, philodendron, phlox, pine, pyracantha, rhododendron, rose, rubber plant, snapdragon, stock, sweet pea, tulip, viburnum, wandering Jew, yew, zinnia.

##### **Trees and Shrubs**

Andromeda, arborvitae, ash, beech, birch, boxwood, cotoneaster, crabapple, dogwood, elm, euonymus, fir, firethorn, forsythia, hawthorn, hémlock, hickory, holly, honey locust, horse chestnut, juniper, larch, laurel, lilac, linden, mimosa (silk tree), myrtle, oak, pine, privet, tulip tree (yellow poplar), willow.

#### **RATES**

NOTE: Mix this product with insecticides or acaricides listed on this label. This product has no insecticidal activity of its own. Rates indicated on this label refer to the proportion of this product to be added to the insecticide or acaricide. Carefully observe the label directions for the insecticide or acaricide to be used, and apply at rates directed on those labels. **Always follow the most restrictive label directions, restrictions, and precautions of all products in a tank mix.** Do not mix with any product that prohibits tank mixtures with pipernyl butoxide.

Rate Restrictions – Food Crops		
Crop	Maximum Use Rate	Restrictions
Field and orchard crops	8 fl. oz. per acre (0.5 lb. ai per acre) or 0.2 fl. oz. per 1,000 square feet	Do not apply more than 10 times per season. Do not reapply within 3 days except in case of extreme pest pressure, in which case do not re-apply within 24 hours. Do not apply to cotton within 14 days of seed harvest.
Hydroponic crops	1.0 ppm ai in water (equivalent to 1 fl. oz. of product per 62,500 gallons of water)	
Greenhouse space spray	0.22 fl. oz. per 10,000 cubic feet	
Greenhouse surface spray	0.2 fl. oz. per 1,000 sq feet	

Rate Restrictions – ornamental, flowering and foliage plants		
Crop	Maximum Use Rate	Restrictions
Greenhouse surface spray	0.58 fl. oz. per 1,000 sq ft	Do not apply more than once a day.
Greenhouse space spray	0.67 fl. oz. per 10,000 cubic ft	
Forestry	20 fl. oz. per acre	
Sod farms	16 fl. oz. per acre	

#### PHYTOTOXICITY NOTICE

Prior to tank mixing, do a compatibility test using the proper proportions of pesticide, synergist and water to ensure physical compatibility of the mixture. Mix at a rate of 2 to 8 fl. oz. of this product per acre, based on the amount of active ingredient. In the absence of specific data or prior experience on growing crops and ornamentals (outdoors, in greenhouses or indoors), test tank mixes on a small sample of the plants to be treated prior to use and observe for any phytotoxic injury.

#### Calculating the amount of this product to use:

Most insecticides are synergized at a rate of 1 to 10 parts of this product's active ingredient to 1 part insecticide active ingredient. Determine the amount of insecticide ai to be used in pounds, then multiply that by the ratio of this product desired (1 to 10). Then divide by 0.0625 (the amount of this product's ai in pounds per fluid ounces). This will be the number of fluid ounces of product to use.

$$\text{Lb insecticide ai} \times \text{ratio of this product} = \text{Fluid ounces of this product required}$$

0.0625

#### TANK MIX RATES

NOTE: Do not exceed maximum use rates in Rate Restrictions table above

Tank mix insecticide	If insecticide rate per acre is:	Then amount of this product is:
Abamectin 2% ai	5 – 10 fl oz	2 fl oz
	16 fl oz	3 fl oz
	20 fl oz	4 fl oz
β – cyfluthrin 12.7% ai	0.8 – 1.6 fl oz	2 fl oz
	1.8 – 2.4 fl oz	3 fl oz
	2.8 fl oz	3.5 fl oz
	3.2 fl oz	4 fl oz
	6.4 fl oz	8 fl oz

Tank mix insecticide	If insecticide rate per acre is:	Then amount of this product is:
Cyfluthrin 25% ai	0.8 fl oz	2 fl oz
	1.6 fl oz	4 fl oz
	2 fl oz	5 fl oz
	2.8 fl oz	7 fl oz
	3.2 – 6.4 fl oz	8 fl oz
Cyfluthrin 20% ai	1 fl oz	2 fl oz
	2 fl oz	4 fl oz
	2.5 fl oz	5 fl oz
	3 fl oz	6 fl oz
	3.5 fl oz	7 fl oz
Cypermethrin 30.6% ai	4 – 8 fl oz	8 fl oz
	2 fl oz	6.4 fl oz
	2.5 – 5 fl oz	8 fl oz
	6.4 fl oz	6.4 fl oz
	8 – 32 fl oz	8 fl oz
Bifenthrin 25.1% ai	1.6 fl oz	4 fl oz
	2.1 fl oz	5.3 fl oz
	2.6 fl oz	6.4 fl oz
	3.2 – 32 fl oz	8 fl oz
Esfenvalerate 8.4% ai	2.9 fl oz	2.4 fl oz
	4.8 fl oz	4 fl oz
	5.8 fl oz	4.8 fl oz
	8 fl oz	6.4 fl oz
	9.6 – 14.5 fl oz	8 fl oz
Fenprothrin 30.9% ai	5 1/3 – 21 1/3 fl oz	8 fl oz
	2 fl oz	4 fl oz
	3 fl oz	6 fl oz
	3.8 fl oz	7.6 fl oz
Imidacloprid 17.4% ai	4 – 20 fl oz	8 fl oz
	0.8 – 1 fl oz	8 fl oz



Tank mix insecticide	If insecticide rate per acre is:	Then amount of this product is:
Lambda cyhalothrin 11% ai	1.92 fl oz	2.4 fl oz
	2.56 fl oz	3.2 fl oz
	3.2 fl oz	4.0 fl oz
	3.84 fl oz	4.8 fl oz
Methomyl 29% ai	12 – 48 fl oz	8 fl oz
Permethrin 38.4% ai	2 fl oz	4 fl oz
	4 – 16 fl oz	8 fl oz
Permethrin 25% ai	3.2 fl oz	4 fl oz
	6.4 – 32 fl oz	8 fl oz
Zeta-cypermethrin 9.6% ai	1.28 – 1.92 fl oz	2 fl oz
	2.24 – 3 fl oz	3 fl oz
	3.2 – 4 fl oz	4 fl oz
Zeta-cypermethrin 18.1% ai	1.4 fl oz	2.6 fl oz
	1.9 fl oz	3.5 fl oz
	2 fl oz	3.8 fl oz
	2.4 fl oz	4.5 fl oz
	2.8 fl oz	5.3 fl oz
	3 fl oz	5.6 fl oz
	3.4 fl oz	6.4 fl oz
	4.3 fl oz	8 fl oz

## CHEMIGATION

This product may be applied through the following types of sprinkler irrigation systems: center pivot, lateral move, end tow, side/ wheel roll, traveler, big gun, solid set, or hand move.

Do not apply this product through any other type of irrigation system.

Ensure uniform distribution of water to avoid crop injury or illegal residue levels in the crop. For questions about calibration, contact your State Extension Service Specialists, the equipment manufacturer, or other experts.

Do not apply by chemigation when wind speed favors drift beyond the area intended for treatment.

Do not connect any irrigation system (including in greenhouses) used for pesticide application to a public water system unless the safety devices prescribed on the pesticide label for public water systems are in place.

A person knowledgeable about the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make adjustments when necessary should the need arise.

The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally-closed solenoid-operated valve on the intake side of the injection pump, and connected to the system interlock

to prevent fluid from being drawn from the supply tank when the irrigation system is shut down manually or automatically. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the pump motor stops. The irrigation line or water pump must include a functional pressure valve which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must have a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) designed for and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Maintain constant agitation in the chemical supply tank during the entire period of application. Applications will be made more accurate and uniform by injection of a larger volume of more dilute pesticide suspension per unit of time.

#### **SHADE AND FOREST TREES\***

Combine REFORM at the rate of  $\frac{1}{2}$  to 2 fluid ounces with the 1 acre dosage of ORTHENE TREE AND ORNAMENTAL SPRAY, SEVIN brand (carbaryl)(\*) WP, 4il.OL, SL, XLR or SEVIMOL to kill GYPSY MOTH LARVAE and CANKER WORMS.

\*EXCEPT CALIFORNIA

#### **OUTDOOR AREAS**

Apply in a broadcast spray of insecticide at a maximum rate of 1.2 fl oz of this product per 1,000 sq ft in treated areas such as non-agricultural rights-of-way; parks; landscape; turf; For crack and crevice or spot treatments, the maximum rate is 8 fl oz of this product per 1,000 sq ft.

Do not apply more than once per day.

#### **OUTDOOR ORNAMENTALS AND LAWNS**

Sites such as trees, shrubs, flowers, foliage plants, lawns, yards, turf grass, golf courses, parks and landscape: When used as a broadcast surface application, do not exceed 0.32 fl oz of this product per 1,000 sq ft treated (16 fl oz per acre). When used as a crack and crevice or spot surface treatment (including applications for fire ants or turf diagnostic aid), do not exceed 8 fl oz of this product per 1,000 sq ft of treated area. Do not apply more than once per day.

#### **OUTDOOR AGRICULTURAL PREMISES**

When used as a broadcast surface spray application, do not exceed 0.32 fl oz of this product per 1,000 sq ft treated (16 fl oz per acre). For crack and crevice or spot surface sprays (including applications for fire ants or turf diagnostic aid), do not exceed 8 fl oz of this product per 1,000 sq ft of space treated. Do not apply more than 1 time per day.

#### **NON-CROP USE RATES AND RESTRICTIONS**

FOR GROWING PLANTS THAT WILL BE CONSUMED AS FOOD, DO NOT EXCEED 0.384 FL OZ (2.3 TEASPOONS) OF THIS PRODUCT PER 1,000 SQ FT, PER APPLICATION.

##### **Non-Crop Mixing Rates Table**

NOTE: Always follow rates and restrictions of the insecticide label. The following table refers only to the mixture rate of this product. This product is not intended for use without an insecticide.

Tank mix insecticide	If insecticide rate is:	Then amount of this product is:
Tau-fluvalinate 22.3% ai	0.2 fl oz	0.5 fl oz
	0.5 fl oz	1.25 fl oz
	4 – 10 fl oz	10 – 25 fl oz

Tank mix insecticide	If insecticide rate is:	Then amount of this product is:
Deltamethrin 4.75% ai	0.25 – 0.5 fl oz	0.25 fl oz
	0.75 fl oz	0.4 fl oz
	1 fl oz	0.5 fl oz
	1.5 fl oz	0.75 fl oz
	4 fl oz	2 fl oz
	8 fl oz	4 fl oz
Bifenthrin 7.9% ai	1 fl oz	0.8 fl oz
	2 fl oz	1.6 fl oz
	5 fl oz	4.0 fl oz
	10 fl oz	8.0 fl oz
	32 fl oz	26.0 fl oz
β-Cyfluthrin 11.8% ai	8 fl oz	0.34 fl oz
	12 fl oz	0.5 fl oz
	16 fl oz	0.68 fl oz
	24 fl oz	1 fl oz
	32 fl oz	1.25 fl oz
	40 fl oz	1.7 fl oz
	60 fl oz	2.5 fl oz
Esfenvalerate 6.4% ai	0.5 fl oz	0.35 fl oz
	1 fl oz	0.7 fl oz
Esfenvalerate 9.36% ai	0.4 fl oz	0.4 fl oz
	0.8 fl oz	0.8 fl oz
Esfenvalerate 3.48% ai	1 fl oz	0.3 fl oz
	2 fl oz	0.6 fl oz
Esfenvalerate 8.4% ai	2.9 fl oz	2.4 fl oz
	4.8 fl oz	4 fl oz
	5.8 fl oz	4.8 fl oz
	8 fl oz	6.4 fl oz
	9.6 – 14.5 fl oz	8 fl oz
Cyfluthrin 6% ai	1 fl oz	0.6 fl oz
	2 fl oz	1.2 fl oz

Tank mix insecticide	If insecticide rate is:	Then amount of this product is:
Lambda Cyhalothrin 9.7% ai	0.2 fl oz	0.25 fl oz
	0.4 fl oz	0.5 fl oz
	0.8 fl oz	1 fl oz
Cypermethrin 23.5% ai	0.33 fl oz	0.85 fl oz
	0.5 fl oz	1.3 fl oz
	0.65 fl oz	1.7 fl oz
	1 fl oz	2.5 fl oz
	1.3 fl oz	3.4 fl oz
	2.6 fl oz	6.7 fl oz
	5.1 fl oz	13 fl oz
Permethrin 36.8% ai	1 fl oz	0.4 fl oz
	1.67 fl oz	0.67 fl oz
	3.33 fl oz	1.33 fl oz
	6.67 fl oz	2.67 fl oz
	16 fl oz	6 fl oz
	1 gal	50 fl oz
	1.25 gal	64 fl oz
Permethrin 25.6% ai	0.64 fl oz	0.25 fl oz
	1 fl oz	0.25 fl oz
	1.28 fl oz	0.33 fl oz
	2.6 fl oz	0.67 fl oz
	3.75 fl oz	1 fl oz
	5 fl oz	1.25 fl oz
	6 fl oz	1.5 fl oz
	10.4 fl oz	2.5 fl oz
	1 gal	32 fl oz
Permethrin 10% ai	0.32 fl oz	0.25 fl oz
	0.64 fl oz	0.25 fl oz
	1 fl oz	0.25 fl oz
	3.2 fl oz	0.5 fl oz
	6.4 fl oz	0.5 fl oz

Tank mix insecticide	If insecticide rate is:	Then amount of this product is:
Imidacloprid 21.4% ai	1 fl oz	2.5 fl oz
	0.27 fl oz	0.67 fl oz
	0.54 fl oz	1.35 fl oz
	1.08 fl oz	2.7 fl oz
	1.35 fl oz	3.37 fl oz
	2.7 fl oz	6.75 fl oz
	5.4 fl oz	13.5 fl oz

In the absence of experience or data with growing plants, a test for possible plant injury should be made on a small sample of the plants before widespread application.

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

**PESTICIDE STORAGE:** If container is damaged: Stop leaks by repositioning the container or by patching or otherwise repairing the leaks. Take care to avoid contact with the pesticide and wear protective gear. On clean up of spilled liquids, wear protective equipment as required to prevent contact with the product or its vapors. Cover the spilled areas with generous amounts of absorbent material, such as clay, diatomaceous earth, sand or sawdust. Sweep the contaminated absorbent on to a shovel and put the sweepings into a salvage drum. Dispose of wastes as below. Place any leaking container into a similar drum or glass container. Do not store, use, pour or spill near heat or open flames.

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

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying.

For Containers 5 gallons or less: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

### **CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS:

LOVELAND PRODUCTS, INC.  
ATTENTION: LAW DEPARTMENT  
P.O. BOX 1286, GREELEY, CO 80632-1286.

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