



Drexel®

# Damoil™

## Dormant & Summer Spray Oil

### ACTIVE INGREDIENT:

Mineral oil\* ..... 98.0%  
**OTHER INGREDIENTS:** ..... 2.0%  
**TOTAL:** ..... 100.0%

\*Petroleum oil Min. Unsulfonated Residue – 95%; Petroleum oil Classification – Unclassified.

Contains petroleum distillates.

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

See **FIRST AID** Below

EPA Reg. No. 19713-123

EPA Est. No. 19713-XX-XXX

Net Content:

2.5 Gals. (9.46 L)

### FIRST AID

#### IF ON SKIN OR CLOTHING:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

#### IF SWALLOWED:

- Call a poison control center or doctor immediately for treatment advice.
- Do not give any liquid to the person.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

#### IF IN EYES:

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

#### IF INHALED:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call CHEMTREC at 800-424-9300 for emergency.

**Note to Physician:** Contains petroleum distillates and may pose an aspiration pneumonia hazard.

### PRECAUTIONARY STATEMENTS

#### Hazards to Humans and Domestic Animals

**CAUTION:** Harmful if absorbed through skin. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

(Continued)

### PRECAUTIONARY STATEMENTS (Cont.)

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Mixers, loaders, applicators, flaggers and other handlers must wear:** Long-sleeved shirt and long pants, chemical-resistant gloves made of barrier laminate or viton  $\geq$  14 mils, and shoes plus socks. See "ENGINEERING CONTROLS" for additional 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 damaged by this product's concentrate. Do not reuse them.

#### ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)].

### USER SAFETY RECOMMENDATIONS

**Users should:** 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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

Toxic to fish. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water when disposing of equipment washwater or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

### PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or 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. Do not apply this product through any type of irrigation system. 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 agency responsible for pesticide regulation.

Manufactured By:

**Drexel Chemical Company**

P.O. Box 13327, Memphis, TN 38113-0327

**SINCE 1972**

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## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 4 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves made of any waterproof material, 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.

Do not enter or allow others to enter until sprays have dried.

DAMOIL is a refined phytonomic oil contact insecticide. It is for use on plants in foliage or the dormant stage.

## MIXING INSTRUCTIONS

1) Add enough water to mix tank to begin agitation. 2) Add micronutrients and other pesticides that are to be part of the mix. If dry pesticide products are used, pre-mix the materials with water thoroughly and add to mix tank. DO NOT add this product before uniform mixture of pesticide and water is obtained. 3) Maintain agitation until the spray is applied. Flush any spray mixture remaining in the hoses back into the tank if the solution stands for more than 20 minutes.

## TANK-MIXING:

Tank-mix only with products registered for use on the specific crop to be treated. When using this product in combination with other pesticides as directed on this label, observe the most restrictive rates, tank-mixing prohibitions, precautionary statements and limitations listed on the product labels involved.

Before tank-mixing with other labeled products, check for tank-mix compatibility. A jar test prior to tank-mixing this product with other pesticides or liquid fertilizer will ensure compatibility. Use a clear glass quart jar with lid and mix the tank-mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately one-half hour. If components of the mixture separate readily, a compatibility agent will be helpful in maintaining the stability of the spray mixture. If the mixture balls up, forms flakes, sludges, gels, oily films or layers, or other precipitates, the components of the mixture are not compatible.

## METHODS OF APPLICATION

This product may be applied using conventional hydraulic sprayers, concentrate application equipment, ground applicators or aircraft. **Do not apply this product or mixes made from it via chemigation.**

**Ground Application:** When applying by ground spray equipment as dilute or concentrate spray, apply the labeled amount of this product in sufficient water for thorough coverage. Reduce spray volume proportionally for smaller and immature plants. If applied as a concentrate spray, the application rate must equal the amount of this product per acre on a per 100 gallon basis except where actual rates are specified. For example, if the dilute application indicates 1 gallon of this product per 100 gallons of water and it requires 500 gallons of spray for thorough coverage, the concentrate spray would require 5 gallons of this product per acre.

**Aerial Application:** Apply the quantity of product indicated in sufficient water to make a minimum of 20 gallons of spray per acre except where indicated otherwise. Use aerial application only if growing and/or soil conditions indicate a ground application to be unfeasible.

## SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, and relative humidity) and method of application (e.g. ground, aerial or airblast) can influence pesticide drift. The applicator and grower must evaluate all factors and make appropriate adjustments when applying this product.

## Wind Speed

Do not apply at wind speeds greater than 15 mph at the application site.

## Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if (a) conditions of temperature inversion exist, or (b) stable atmosphere conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

## Droplet Size

Apply as a medium or coarser spray (ASABE standard 572), and the minimum volume mean diameter (VMD) for spinning atomizer nozzles.

## Airblast Applications

For airblast applications, turn off outward-pointing nozzles at row ends and when spraying outer row. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

## Ground Spraying Applications

**Release Height:** For applications using ground-spraying equipment, apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

## Aerial Applications

**Release Height:** For aerial applications of agricultural products, do not release spray at a height greater than 10 feet above the ground, top of crops or above the orchard canopy.

**Boom Length:** The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

**Swath Adjustment:** When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind. Leave at least one swath width unsprayed at the downwind edge of the treated field.

## INSTRUCTIONS AND PRECAUTIONS

DO NOT USE THIS PRODUCT in combination with or immediately preceding or following applications of Captan, Carbaryl, Folpet, Propargite and Sulfur Compounds.

For foliage application, the spray tank must be free of any Sulfur residue before using this product. Do not combine Sulfur sprays with this product on foliage and do not follow a previous application of Sulfur or apply Sulfur following this product until sufficient time has elapsed for safety (at least 30 days) except in the Northwest (OR and WA). In OR and WA, it may be used in combination on Pears as a Post-harvest (after all fruit is off the tree), Dormant and Delayed-Dormant (before scales slip, or at or prior to bud swell) treatment.

Use precaution when applying this product at temperatures above 90°F. Treat a small area and observe it for signs of damage to plants (phytotoxicity). Allow enough time for symptoms to appear before continuing to spray.

Do not use this product when temperatures are above 95°F. When temperatures drop below 32°F (usually nighttime lows), do not spray trees and vine crops until daytime temperatures have warmed to a point above 32°F and are free from moisture due to melting frost or heavy dews. Application to trees weakened by disease, drought, drying winds or high nitrogen applications may result in oil injury.

## USE INSTRUCTIONS

**Dilute this product with water before use.**

**Amounts given are for 100 gallons of diluted spray solution unless otherwise specified.**

**ACEROLA (Barbados Cherry)\*, ATEMOYA\*, CARAMBOLA (Star Fruit)\*, RAMBUTAN\*:** Aphids, Beetle larvae, Caterpillars, Leafhoppers, Leafminers, Mites, Thrips, Whiteflies; Alternaria leafspot, Gummy stem blight, Powdery mildew, Rusts — **Dilute Spray:** Use 0.75 to 1.5 gallons of this product per 100 gallons of water at 200 to 500 gallons of water per acre. **Concentrate Spray:** Use 3 to 6 gallons of this product per acre in a minimum of 20 gallons of water per acre.

Cucumber mosaic virus, Papaya ringspot virus, Pepper mottle virus, Potato leafroll virus, Potato virus Y, Tobacco etch virus, Watermelon mosaic virus 2, Zucchini yellow mosaic virus — **Dilute Spray:** Use 0.75 to 1.5 gallons of this product per 100 gallons of water at 200 to 500 gallons of water per acre. **Concentrate Spray:** Use 3 to 6 gallons of this product per acre in a minimum of 20 gallons of water per acre. Spray once or twice weekly depending on the growth of crop and/or vector pressure. When using to control insect transmitted diseases, use higher pressure (minimum 100 psi) and ceramic hollow cone nozzles.

\*Except California

**ALFALFA Seed Crop Only:** Use 0.25 gallon (1 qt.) of this product per acre in a minimum of 20 gallons of water per acre by ground application or minimum of 10 gallons per acre by air when used in combination and at the specified label rates with Malathion 5EC (an emulsifiable concentrate containing 5 pounds of malathion per gallon) or other insecticides or miticides that permit tank-mixture with oil for control of the pests listed on the label. To increase the effectiveness of desiccants, apply 2 gallons of this product per acre in a minimum of 10 gallons of spray by air. Use is limited to those herbicides/desiccants labeled for Alfalfa Seed desiccation.

Spider mites: Use 0.25 gallon (1 qt.) of this product per acre at the dilutions noted above.

**ALMONDS, APRICOTS, CHERRIES, NECTARINES, PEACHES, PLUMS, PRUNES Dormant or Delayed-Dormant:** Aphids (eggs), Black scales, Brown apricot scales, Brown mites, European fruit lecaniums, Frosted scales, Italian pear scales, Oleander scales, Olive scales, Parlatoria scales, Putnam scales, Red spider mites, San Jose scales, Soft brown scales — Apply 1.5 to 2 gallons of this product in 300 to 600 gallons of water per acre or 4 to 6 gallons per acre in a minimum of 20 gallons of spray as a concentrate spray.

**Summer Use:** Red spider mites — Apply 3 to 4 quarts of this product in 300 to 600 gallons of water per acre as a dilute spray. Summer stages of Brown apricot scales, San Jose scales — Apply 1 gallon of this product in 300 to 600 gallons of water per acre as a dilute spray.

**Almonds and Apricots Dormant or Delayed-Dormant:** European red mite — Apply 4 to 8 gallons of this product in a minimum of 20 gallons of spray per acre. **Spring or Summer Use:** Brown mite, European red mite, Pacific mite, Two-spotted mites — Apply 1 to 2 gallons of this product in 300 to 600 gallons of water per acre as dilute spray. Apply 4 to 6 gallons of this product per acre in a minimum of 20 gallons of water as concentrate spray. If applied by air, apply at least 4 but no more than 6 gallons of this product per acre in a minimum of 20 gallons of spray.

**Plums and Prunes Dormant or Delayed-Dormant:** Peach twig borer — Apply 1.5 to 2 gallons of this product per acre in 100 gallons of water. As concentrate spray, apply 6 to 8 gallons of this product per acre in minimum of 20 gallons of water. If applied by air, use 6 to 8 gallons of this product per acre in a minimum of 20 gallons of water.

**Use Restrictions on Cherries Only:** Do not apply more than 2 gallons per 100 gallons of spray mixture or 2% by volume. DO NOT apply this product in conjunction with azinphos-methyl based insecticides.

**APPLES Dormant or Delayed-Dormant:** Aphid eggs, Pear scales, Red spider mites, Rust mites, San Jose scale — Apply 1 to 2 gallons of this product per acre in 50 to 200 gallons of water as dilute spray. **Dormant (ID, OR, WA):** Mites, San Jose scales — Apply 1 to 1.5 gallons of this product per acre as dilute spray with Sulfur or Lime sulfur at the label specified rate. As concentrate spray, apply 4 to 6 gallons of this product with Sulfur or Lime sulfur at the label specified rate to total 20 to 100 gallons of spray per acre. **Summer Use:** European red mites, Pacific mites, Two-spotted spider mites — Apply 1 to 1.5 gallons of this product per acre in 400 to 800 gallons of water. For concentrate spray, use no more than 4 gallons of this product per acre in minimum 20 gallons of spray.

By air, use at least 4 but no more than 6 gallons of this product in minimum 20 gallons of spray per acre.

**Use Precaution:** Oil plus Sulfur or Lime sulfur can cause severe foliage and fruit bud injury if applied after the dormant period.

**AVOCADOS:** Bugs, Leafhoppers, Mites, Scales, and Thrips — Apply 1 to 4 gallons of this product per 100 gallons of water in a dilute spray of 400 to 3000 gallons per acre. Do not apply more than 30 gallons of this product per acre per application. For concentrate spray, apply 1 to 18 gallons of this product per acre in 50 to 100 gallons of spray mixture or in enough water for adequate coverage. For aerial application, apply 1 to 18 gallons of this product per acre in 20 to 100 gallons of spray. When application of this product is more than 2% v/v concentration, treat a small area and observe. Allow enough time for symptoms to appear before continuing to spray.

**BANANAS, PLANTAINS:** Black leaf streak, Sigatoka (Black, Yellow); This product will also loosen Sooty mold fungus and limit its formation by controlling Aphids, Mealybugs, Scale insects, and Whiteflies — Apply 0.5 to 1.5 gallons of this product in 20 to 100 gallons of water per acre. For application by Mist blower, use 1.5 gallons of this product in 6 gallons of water per acre. Begin application when disease or insect pest first appears and continue every 10 to 15 days during the rainy period or as needed. DO NOT apply when daytime temperatures exceed 80°F (26.6°C) as injury may occur.

Phytotoxicity may be affected by the quantity of oil used, vigor of trees, and temperatures at time of application. Bag fruits or use a directed spray on unbagged fruits to improve crop safety.

**BLUEBERRIES, BUSHBERRIES, CANEBERRIES:** Aphids, Mealybugs, Mites, Sawfly eggs, Scales, Whiteflies; Powdery mildew, Rust — Apply 0.75 to 1.5 gallons of this product in 100 gallons of water per acre with ground equipment for optimum spray coverage of leaf surfaces. For fungal diseases, use at least 200 psi spray pressure.

**BEETS:** Aphids, Armyworms, Beetle larvae, Caterpillars, Leafminers, Mites, and Whiteflies; Cercospora leafspots — Apply 1 to 2 gallons of this product in 100 gallons of water per acre.

**CITRUS (Citrus spp., Fortunella spp.)**

**Citron, Grapefruit, Mandarins, Oranges (Navel, Valencia), and Other Citrus spp.:** Mealybugs\*, Mites, Scales (Black, Brown, Brown soft, California Red, Chaff, Citricola, Glover, Purple, Red, Snow, Yellow), Spider mites (Pacific, Red, Two-spotted), Whiteflies; Sooty mold — Apply 1.2 to 1.4 gallons of this product in late Summer through October. In Southern California (including all coastal counties), apply 0.5 to 1.4 gallons per acre throughout the year. Apply in enough water for thorough coverage. As concentrate spray, apply in a minimum of 20 gallons of spray per acre.

**Use Precaution:** On Navel oranges, do not apply during or after color break.

**Use Restrictions:** Do not exceed a maximum of 212 pounds of active ingredient (29.5 gallons of this product) in a maximum volume of 2000 gallons of spray mix per acre when treating Citrus in California. Do not exceed a maximum of 159 pounds of active ingredient (22.1 gallons of this product) in a maximum volume of 1500 gallons of spray mix per acre when treating Citrus in Florida or Texas.

\*Except California

**Lemons, Limes:** Mealybugs\*, Mites (Bud, Flat, Red spider, Rust), Scales (Black, Brown, Brown soft, California Red, Chaff, Citricola, Glover, Purple, Red, Snow, Yellow), Whiteflies; Sooty mold — Apply 1.2 to 1.4 gallons of this product per acre in late Spring and late Summer through December. In Southern California, apply 0.5 to 1.4 gallons of this product per acre throughout the year. Apply in enough water for thorough coverage. As concentrate spray, apply this product in a minimum of 20 gallons of spray per acre.

**Use Restrictions:** Do not exceed a maximum of 212 pounds of active ingredient (29.5 gallons of this product) in a maximum volume of 2000 gallons of spray mix per acre when treating Citrus in California. Do not exceed a maximum of 159 pounds of active ingredient (22.1 gallons of this product) in a maximum volume of 1500 gallons of spray mix per acre when treating Citrus in Florida or Texas.

\*Except California

**All Citrus Varieties:** Use this product as an adjuvant with a suitable insecticide or miticide. Do not exceed 0.4% v/v concentration. Do not use this product when freezing temperatures are expected within 24 hours of application. Precautions should be taken when combining this product with certain insecticides and miticides due to possible increased phytotoxicity when applied over the foliage. Consult an Agricultural Extension Service agent for recommendations on special combinations.

**COCOA:** Bugs, Leafhoppers, Leafroller, Scales, Thrips; Sigatoka — Apply 1 to 2 gallons of this product in 100 gallons of water per acre. Use as needed.

**COFFEE:** Coffee borer, Green scale — Apply 3 to 6 gallons of this product in 100 gallons of water per acre. Use water only as a diluent.

**Use Restriction:** Do not apply more than 6 gallons of this product per acre per application.

**CORN:** Aphids, Beetle larvae, Caterpillars, Leafminers, Mites, and Whiteflies — Apply 1 to 2 gallons of this product in 100 gallons of water per acre.

On Corn, this product may also be used in combination with atrazine by ground application at the rate of 1 gallon in 20 to 40 gallons of water per acre or by air at the rate of 0.5 gallon in minimum 5 gallons of water per acre. Follow the use precautions, limitations, and directions for use given on the atrazine product label.

**COTTON:** Corn rootworm, Earworm, Fall armyworm, Leafhopper, Leafminer, Mites, Whiteflies; Cercospora — Apply 3 to 6 quarts of this product in 100 gallons of water per acre. Using ground equipment, spray for optimum coverage of leaf surfaces. For fungal diseases, use at least 200 psi spray pressure.

**FIGS Dormant or Delayed-Dormant:** Aphids, Fig scales, Mealybugs, Mites, Scales — Use 2 to 3 gallons of this product per 100 gallons of water. Apply 300 to 600 gallons of spray mix per acre.



Use 3 gallons of this product per 100 gallons of water for severe infestation. Apply 4 to 6 gallons of this product in a minimum of 50 gallons of spray as a concentrate spray per acre.

**GRAPES Dormant:** Mealybugs — Apply 4 to 6 gallons of this product in 200 to 300 gallons of spray solution per acre. If applied in tank-mixture with another insecticide, use 1 to 2 gallons of this product in 200 to 300 gallons of water per acre to control Mealybugs. As a concentrate spray, apply 1 to 2 gallons of this product per acre with an appropriate insecticide in enough water for thorough coverage.

**Dormant and Summer Use:** Leafhoppers, Leafminers, Mites, Scales, Whiteflies; Botrytis, Powdery mildew - Apply as dilute spray using 0.75 gallons of this product in 100 gallons of water at 100 to 500 gallons of water per acre. As concentrate spray, use 1 to 3 gallons of this product per acre in minimum 50 gallons of water per acre. Use as needed. **Use Precautions:** This product can temporarily affect surface bloom appearance, but will not cause subsurface injury. DO NOT apply this product within 2 days of harvest of Grapes intended for fresh market for suppression of Leafhopper or Mites.

**GRASSES GROWN FOR SEED (BLUEGRASS, FESCUES, ORCHARDGRASS, PERENNIAL RYEGRASS):** Mites; Powdery mildew, Rust — Apply 1 to 2 gallons per acre in a minimum of 10 gallons of water per spray. Initiate sprays in late Spring or early Fall when Powdery mildew and Rust pustules are noticeable. Continue sprays every 14 to 21 days.

**GREENHOUSES, CONTAINERS, AND INTERIORSCAPES** Use once a week initially. As the pest is controlled, decrease the frequency to every 2 to 3 weeks as needed.

Some plants are more sensitive to oil treatment if any of the following conditions are present at the time of application: High humidity (74%), an overcast or cloudy day, inadequate air flow, a small greenhouse where the sunlight is magnified causing a fast build up of temperature and light intensity.

**Ageratum crown of thorns, Dieffenbachia, Ferns, Ficus, Lisianthus, Orchids, Palms, Petunia, Poinsettia, Schefflera, Sunflower Summer (Foliar or Cover):** Aphids, Fungus gnats, Leafminers, Mealybugs, Scales (hard, soft), Spider mites, Thrips, Whiteflies — Apply 0.5 to 1 gallon of this product in 100 to 200 gallons of water per acre. Due to varietal differences in response to a treatment of this product at the labeled rate, conduct a small test on 1 or 2 plants of the specific variety to be treated.

**Aglaonema, Aster, Azaleas, Begonias, Browallia, Camellias, Carnations, Celosia, Chrysanthemum, Coleus, Cosmos, Crepe myrtle, Dusty miller, Easter lily, Fuchsia, Gardenias, Gerbera, Gladiola, Helichrysum, Hibiscus foliage, Hydrangea, Impatiens, Iris, Jade plant, Lillies, Marigold, Mums, New Guinea impatiens, Nicotonia, Philodendron, Portulaca, Reiger begonias, Rhododendron, Roses, Snapdragon, Vines, Zinnias Summer (Foliar or Cover):** Aphids, Fungus gnats, Leafminers, Mealybugs, Scales (hard, soft), Spider mites, Thrips, Whiteflies; Powdery mildew, Rusts — Apply 1 to 2 gallons of this product in 100 to 200 gallons of water per acre. Due to varietal differences in response to a treatment of this product at the labeled rate, conduct a small test on 1 or 2 plants of the specific variety to be treated.

**Leaf Polish for Hardy Plants Summer (Foliar or Cover):** Apply 1 gallon of this product in 100 gallons of water. Wipe upper and lower sides of leaf until fully covered.

**HOPS:** Aphids, Leafrollers, Mites, Scales, Whiteflies; Powdery mildew — Apply 1 to 2 gallons of this product in 100 gallons of water per acre. Begin application at early leaf stage and repeat at 10 to 14 day intervals. Discontinue application at Burr development.

**KIWI:** Aphids, Mites, Scales (Greedy, Latania, Oleander, San Jose) — Apply 4 to 6 gallons of this product in minimum of 100 gallons of water per acre. Use the 6 gallon rate when pest populations are high.

**MACADAMIA:** Bugs, Leafhoppers, Leafrollers, Scales, Thrips; Sigatoka — Apply 1 to 2 gallons of this product in 100 gallons of water per acre. Use as needed.

**MANGOES:** Mites; Powdery mildew—Apply 1 to 1.5 gallons of this product in minimum of 100 gallons of water per acre.

**OLIVES:** Aphids, Black scales, Mites, Oleander scales, Olive scales, Parlatoria scales, Spider mites — Apply 1.5 gallons of this product in 400 to 500 gallons of water per acre. Apply in pre-bloom or in post-bloom up to buckshot and post-harvest.

**ORNAMENTALS, FLOWER AND FOLIAGE PLANTS, SHRUBS, CHRISTMAS TREES, AND SHADE TREES**

**Azalea, Camellia, Carnation, Fuchsia, Gladiola, Hibiscus, Iris, Lily, Orchids, Rhododendron, Vines:** Aphids, Fungus gnat, Leafminers, Mealybugs, Mites, Scales, Thrips, Whiteflies; Powdery mildew, Rust — Apply this product at 1 to 2 gallons of water as needed.

**Chrysanthemum, Diffenbachia, Philodendron, Poinsettia:** Leafminers, Mealybugs, Mites, Scale insects, Whiteflies; Black spot, Powdery mildew — Apply 1 to 2 ounces per gallon. Use Albuz ATR nozzles, lilac color or their equivalent. Apply weekly or every two weeks depending on level of pest infestation, from 20 to 100 gallons of dilute spray emulsion per acre, depending on plant size. Spray to the point of runoff. Vary quantity of spray applied by changing the number of nozzles used, not by changing pressure, speed of spray or nozzle size.

**Christmas Trees Winter:** Aphids, Adelgids, Scales (soft and hard; immature), Spider mites — Apply in 2 to 4 gallons of this product as needed. **Summer:** Aphids, Adelgids, Scales (soft and hard; immature), Spider mites — Apply 1 to 3 gallons of this product as needed. Do not apply more than 0.02 gallon (2.56 fl. ozs.) per gallon of water per application using ground equipment during the Winter period.

**Flower and Foliage Plants (including Roses and other flowering shrubs) Winter Dormant Period:** Aphids, Adelgids, Bugs (immature), Caterpillars, Eriophyid mites, Gall mites, Lace bugs, Leaf beetle larvae, Leafminers, Mealybugs, Psyllids (immature), Sawfly larvae, Scales (immature), Spider mites, Whiteflies (immature) — Apply this product at 2 to 3 gallons as needed. **Summer:** Apply 1 to 2 gallons of this product as foliar or cover spray as needed.

**Oak, Privet:** Black scale, Brown apricot scale, Brown soft scale, Oyster shell scale, Red spider mites and Eggs, San Jose scale, — Apply 1 gallon in 100 gallons of water. **Dormant Spray on Deciduous Varieties:** Apply 2 gallons in 100 gallons of water. **Dormant Spray on Other Varieties:** Apply 1 gallon in 100 gallons of water. See 'Plant Restrictions' section below for use precautions.

**Ornamentals (Foliage and Bedding Plants) Winter Dormant Period:** Adelgids, Aphids, Bugs (immature), Caterpillars, Eriophyid mites, Gall mites, Lace bugs, Leaf beetle larvae, Leafminers, Mealybugs, Psyllids (immature), Sawfly larvae, Scales (immature), Spider mites, Whiteflies (immature) — Apply this product at 2 to 3 gallons as needed. **Summer:** Apply 1 to 2 gallons of this product as foliar or cover spray as needed.

**Shade Trees and Shrubs including Broadleaf evergreens, Conifers, Deciduous and Woody ornamentals Winter Dormant Period:** Aphids, Bugs (immature), Caterpillars, Eriophyid mites, Gall mites, Lace bugs, Leaf beetle larvae, Leafminers, Mealybugs, Psyllids (immature), Sawfly larvae, Scales (immature), Spider mites, Whiteflies (immature) — Apply this product at 2 to 4 gallons as needed. **Summer:** Apply 1 to 3 gallons of this product as foliar or cover spray as needed.

See 'Plant Restrictions' section below for use precautions.

**Shrubs and Trees along city streets, other Rights-of-way including Broadleaved evergreens, Conifers and Deciduous Winter Dormant Period:** Aphids, Bugs (immature), Caterpillars, Eriophyid mites, Gall mites, Lace bugs, Leaf beetle larvae, Leafminers, Mealybugs, Psyllids (immature), Sawfly larvae, Scales (immature), Spider mites, Whiteflies (immature) — Apply this product at 2 to 4 gallons as needed. **Summer:** Apply 1 to 3 gallons of this product as foliar or cover spray as needed.

See 'Plant Restrictions' section below for use precautions.

**Plant Restrictions:** Oil removes the glaucous (blue) bloom from such Evergreens as Colorado blue spruce and Koster spruce. Do not spray on Walnut foliage. Always use lower dosage or test spray oil sensitive plants such as *Chamaecyparis*, *Cryptomeria*, Japanese holly, Juniper, Smoke tree, and Spruce. Tendency toward sensitivity: Douglas fir and Red cedar. Use with precaution and reduce dosage for dormant application on Red bud and Sugar maple. Do not spray when buds have fully opened and shoot elongation is occurring.

Do not use on Conifers or Ferns not tolerant to oil sprays. In California, limit the use of this product to American red oak, Cornelian cherry, Crabapple, Dogwood, Japanese black pine, Purple leaf plum, Weeping cherry. Keep sprays away from open blooms; bleaching and spotting has been observed with the open blooms of certain plants.

Do not apply this product when there is obvious moisture deficit in leaves or plant is under stress.

Do not apply this product more than 4 times during the growing season. Allow at least a 2-week interval between applications to the same plants. For Fall dormant applications, reduce the rate to 2 gallons of this product.

**PAPAYA:** Mites; Papaya ringspot virus, Powdery mildew — Apply 0.75 to 1.5 gallons of this product in minimum of 100 gallons of water per acre.

**PEANUT:** Aphids, Beetle larvae, Leafhoppers, Leafminers, Mites, Thrips, Whiteflies; Powdery mildew — Apply 1 to 2 gallons of this product in 100 gallons of water per acre. Use as needed.

**PEARS *Dormant or Delayed-Dormant*:** Aphids (eggs), Codling moth\*, European fruit lecanium scales, European red mites (eggs), Olive scales, Pear scales, Red spider mites, San Jose scales — Apply 1 to 2 gallons of this product in 50 to 200 gallons of water per acre. As concentrate spray, use 3 to 8 gallons of this product in minimum of 50 gallons of water per acre. ***Dormant or Delayed-Dormant*:** Fruit tree leafrollers, Pear leaf blister mites — Use 1 to 3 gallons of this product in 100 gallons of water at 100 to 800 gallons of water per acre as dilute spray. As concentrate spray, use 3 to 12 gallons of this product in minimum of 50 gallons of water per acre. ***Delayed-Dormant*:** Pear psylla — Apply 2 gallons of this product in 50 to 200 gallons of water per acre. As concentrate spray, apply 4 to 6 gallons in a minimum of 20 gallons of spray per acre. ***Delayed-Dormant and Fall Spray*:** Blister mites — Apply 2 gallons of this product. ***Summer Use*:** European red mites, Pacific mites, Two-spotted spider mites — Apply 1 to 1.5 gallons of this product per acre in 400 to 800 gallons of water as dilute spray. As concentrate spray, do not apply more than 4 gallons of this product per acre in a minimum of 20 gallons of spray per acre.

If applied by air, apply at least 4 but no more than 6 gallons of this product in a minimum of 20 gallons of spray per acre. **California Only:** As concentrate spray, apply 4 to 6 gallons of this product in 90 to 120 gallons of spray per acre. For Summer forms of Italian pear scales and San Jose scales, apply 1 to 1.5 gallons of this product as concentrated spray.

***Dormant (ID, OR, WA)*:** Pear psylla — Apply 1 to 1.5 gallons of this product per acre as dilute spray with Sulfur or Lime sulfur at the specified label rate. As concentrate spray, DO NOT apply more than 5 gallons of this product with Sulfur or Lime sulfur at the labeled rate in 20 to 100 gallons of spray per acre.

**Use Precaution:** Oil plus Sulfur or Lime sulfur can cause severe foliage and fruit bud injury if applied after the dormant period.

\* Use of this product against Codling moth on Pears is not approved in California unless accompanied by Supplemental label.

**PECANS:** Obscure scale — Apply 3 to 3.5 gallons of this product per 100 gallons of water during free dormancy and when temperature is between 50°F and 70°F. Apply in minimum 200 gallons of water per acre.

***Dormant or Delayed-Dormant (Dilute Sprays)*:** Aphids (eggs), Mites (eggs), Scales — Use 2 to 3 gallons of this product per 100 gallons of water. Apply in minimum 200 gallons of water per acre. Use the 2 gallon rate when trees are in a weakened condition. Apply from late February until buds first break. ***Dormant or Delayed-Dormant (Concentrate Sprays)*:** Aphids (eggs), Mites (eggs), Scales — Use 6 to 8 gallons of this product per acre. Apply in minimum 20 to 125 gallons of water per acre. Use the 6 gallon rate when trees are in a weakened condition. Apply from late February until buds first break.

**PEPPERMINT, SPEARMINT:** Mites; Powdery mildew — Apply 1 to 2 gallons of this product per acre. With ground equipment, apply for thorough coverage when Powdery mildew is present or Mint is 5 to 6 inches tall. Repeat at 14 to 21 day intervals. Use higher rates under severe disease pressure. Spray with a minimum of 20 gallons per acre of water.

**PINEAPPLE:** Aphids, Bud moth, Chinese rose beetle, Mealybugs, Mites, Scales — Apply 1 to 2 gallons of this product in 100 gallons of water per acre as spray. Apply 1 to 2 gallons of this product per 100 gallons of water as dip. Dip for 30 seconds.

**PISTACHIOS: *Dormant, Delayed-Dormant or Post-harvest Applications*:** Leafrollers\*, Mealybugs\*, Mites, Scales, Wintering phytocoris — Apply alone or in combination with other registered products shown effective against Soft scales. For dilute applications, apply 5 to 10 gallons of this product in 250 to 500 gallons of water per acre. Do not use more than 2% v/v solution as a dilute application. For concentrate applications, apply 4 to 8 gallons of this product in 70 to 150 gallons of water per acre. Do not use more than 6% v/v solution as a concentrate application. Use concentrate application for moderate to severe pest populations. Apply by mid-February. Applications made in January or February, especially at rates above 10 gallons of this product per acre may result in advanced bud break and bloom, which may increase the potential for frost damage. Do not apply this product when orchard is not vigorous or when under stress.

\*Except California

**POMEGRANATE: *Dormant or Delayed-Dormant*:** Aphid (eggs), European red mite (eggs), Mealybugs, Scales (Black, Brown soft, Frosted, Olive, San Jose) — Use 2 to 3 gallons of this product in 100 gallons of water at 50 to 300 gallons of water per acre. Apply in Winter when leaves are not present.

***Summer (Foliar or Cover)*:** Aphids, Mealybugs, Scale crawlers, Spider mites, Whiteflies — Use 1 to 3 gallons of this product in 100 gallons of water at 50 to 300 gallons of water per acre. Spray every 2 to 3 weeks depending on pest pressure.

**STRAWBERRIES:** Aphids, Mites, Sawflies, Scales, Whiteflies; Powdery mildew, Rusts — Use 0.75 to 1.5 gallons of this product in 100 gallons of water at 100 to 200 gallons of water per acre. Spray at no less than 400 psi using ceramic spray nozzles (Albuz® ATR, lilac color or their equivalent).

**SUGAR BEETS:** Aphids, Armyworms, Leafhoppers\*, Leafminers, Mites, Whiteflies; Cercospora leafspots\* — Apply 0.75 to 2 gallons of this product in minimum 10 gallons of water per acre. Using ground equipment, spray for optimum coverage of leaf surfaces. For fungal diseases use at least 200 psi spray pressure. Use as needed.

\*Except California

**TOBACCO:** Aphids, Beetle Larvae, Leafhoppers, Leafminers, Mites, Thrips, Whitefly — Apply 0.75 to 1 gallon of this product per 100 gallons of water per acre.

## VEGETABLES & MISCELLANEOUS CROPS

**Asparagus, Beans, Cucurbits, Peppers, Squash, and Tomatoes:** Aphids, Beetle larvae, Caterpillars, Leafhoppers, Leafminers, Mites, Thrips, Whiteflies; Powdery mildew — Apply 0.75 to 2 gallons of this product in 100 gallons of water per acre.

**Tomatoes:** Armyworm\*, Fruit worm\*, Horn worm\*, Lygus bug\*, Stink bug\*, Tomato pinworm\*, Tomato psyllid\*; Alternaria leafspot, Cucumber mosaic virus, Gummy stem blight, Papaya ringspot virus, Pepper mottle virus\*, Potato leafroll virus\*, Potato virus Y\*, Tobacco etch virus\*, Rust, Watermelon mosaic virus 2\*, Zucchini yellow mosaic virus\* — Use 0.75 to 1.5 gallons per 100 gallons of water. Apply at 25 to 150 gallons of water per acre once or twice weekly depending on the rapid growth of the crop and/or vector pressure. When using to control insect transmitted diseases, use higher pressure (100 psi) and ceramic hollow cone nozzle.

\*Except California

**Balsam apple, Balsam pear, Bitter melon, Broccoli, Broccoli raab, Brussels sprouts, Cabbage, Cantaloupe, Casaba, Cauliflower, Cavalo broccoli, Celery, Chayote, Chinese broccoli, Chinese cabbage (Bok choy and Napa), Chinese cucumber, Chinese mustard cabbage (Gai choy), Chinese okra, Chinese waxgourd, Citron melon, Collards, Crenshaw melon, Cucumber, Cucuzza, Dasheen (Taro), Eggplant, Gherkin, Golden pershaw melon, Hechima, Honeydew melon, Hyotan, Japanese radish (Daikon), Kale, Kohlrabi, Lettuce, Mango melon, Melons, Mizuna, Mustard greens, Mustard spinach, Okra, Peas, Persian melon, Potatoes, Pumpkin, Radish, Rape greens, Summer squash, Sweet potatoes, True cantaloupe, Watermelon, Winter squash:** Aphids, Beetle larvae, Caterpillars, Leafminers, Leafhopper, Loopers\*, Mites, Thrips, Whiteflies; Alternaria leafspot, Gummy stem blight, Powdery mildew, Rust — Apply 0.75 to 1.5 gallons of this product per acre in 50 to 100 gallons of water.

Cucumber mosaic virus, Papaya ringspot virus, Pepper mottle virus, Potato virus Y, Tobacco etch virus, Watermelon mosaic virus 2, Zucchini yellow mosaic virus — Apply 0.75 gallons in 50 to 100 gallons of water per acre. Spray once or twice weekly depending on growth of crop and/or vector pressure. When using to control insect transmitted diseases, use higher pressure (100 psi) and ceramic hollow cone nozzle.

\*Except California

**Chinese artichoke\*/Japanese artichoke\*:** Aphids, Beetle larvae, Caterpillars, Leafhoppers, Leafminers, Mites, Pepper psyllids, Thrips, Whiteflies; Alternaria leafspot, Cucumber mosaic virus, Gummy stem blight, Papaya ringspot virus, Pepper mottle virus, Potato leafroll virus, Potato virus Y, Powdery mildew, Rust, Tobacco etch virus, Watermelon mosaic virus 2, Zucchini yellow mosaic virus — Apply 1 to 2 gallons in minimum 50 gallons of water per acre. Spray once or twice weekly depending on the growth of the crop and/or vector pressure. When used to control insect transmitted diseases, use higher pressure (minimum 100 psi) and ceramic hollow cone nozzles. For fungal diseases, use at least 200 psi spray pressure.

\*Except California

**Garlic\*, Leeks\*, Onions (Dry bulb and Green)\*, Shallots\*:** Leafminers, Maggot flies, Mites, Thrips — Apply 0.5 to 1.5 gallons of this product per 20 gallons minimum of water. Make applications when pests appear and repeat as necessary to maintain control.

This product may be used with other registered insecticides such as pyrethroids to improve control of Thrips. Follow all label precautions and directions for use on other registered insecticides.

\*Except California

#### **Miscellaneous Crops**

##### **Cilantro\*, Mexican oregano\*, Mint\*:**

Aphids, Beetle larvae, Caterpillars, Leafhoppers, Leafminers, Mites, Pepper psyllids, Thrips, Whiteflies; Alternaria leafspot, Cucumber mosaic virus, Gummy stem blight, Papaya ringspot virus, Pepper mottle virus, Potato leafroll virus, Potato virus Y, Powdery mildew, Rust, Tobacco etch virus, Watermelon mosaic virus 2, Zucchini yellow mosaic virus — Apply 1 to 2 gallons of this product in minimum 50 gallons of water per acre. Spray once or twice weekly depending on the growth of the crop and/or vector pressure. When using to control insect transmitted diseases, use higher pressure (minimum 100 psi) and ceramic hollow cone nozzles.

\*Except California

**Ginger\*, Ginseng\*, Herbs and Spices (Curly leaf basil, Lemon balm)\*:** Aphids, Beetle larvae, Caterpillars, Leafhoppers, Leafminers, Mites, Thrips, Whiteflies; Alternaria leafspot, Cucumber mosaic virus, Gummy stem blight, Papaya ringspot virus, Pepper mottle virus, Potato leafroll virus, Potato virus Y, Powdery mildew, Rust, Tobacco etch virus, Watermelon mosaic virus 2, Zucchini yellow mosaic virus — Apply 0.75 to 1.5 gallons in 50 to 100 gallons of water per acre. Spray once or twice weekly depending on the growth of the crop and/or vector pressure. When using to control insect transmitted diseases, use higher pressure (minimum 100 psi) and ceramic hollow cone nozzles.

\*Except California

**WALNUTS Late Spring to Mid-Summer Only:** Summer stages of European fruit scales, Frosted scales, Red spider mites, San Jose scale, and other Soft-shelled scales — Apply 0.5 to 1 gallon of this product.

**Delayed-Dormant:** Black, Calico, European fruit lecanium scales, Frosted, Olive, Red spider mite eggs, San Jose scale, and Walnut aphid eggs — Apply 2 gallons of this product in 300 to 500 gallons of water per acre. Spider mites — Apply 4 gallons of this product per acre in 200 to 400 gallons of water on fully expanded leaves as foliar spray. As concentrate spray, for Delayed-Dormant and foliar sprays, apply in a minimum of 40 gallons of water per acre.

As an adjuvant for neutral copper compounds for control of Walnut blight in pre- and post-bloom sprays: Apply 1 quart of this product per 100 gallons of water as a dilute spray. Follow dosages and timing on the copper product label.

**Use Precautions:** Use this product only on trees that have not suffered from lack of moisture or other stressing factors during the growing season. Do not apply when soil moisture is low. Do not apply after husk splits.

## **STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment.

**PESTICIDE STORAGE:** Store under lock and key in a ventilated room and secure from access by unauthorized persons and children. Store in a cool, dry area away from any heat or ignition source. Do not stack over 2 pallets high. Move containers by handles or cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep container away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination.

Store in original containers only. If the contents are leaking or material is spilled, follow these steps:

1. Contain spill. Absorb with a material such as sawdust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with soap and water to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer contents, as soon as possible, to an empty, original container.
6. Do not allow runoff to enter sewer or contaminate water supplies.
7. Dispose of waste as indicated below.

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

*(Continued)*

## **STORAGE AND DISPOSAL (Cont.)**

### **CONTAINER HANDLING:**

#### **Nonrefillable Container (rigid material; less than 5 gallons):**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. 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 one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

#### **Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons):**

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

#### **Refillable Container (≥ 250 gallons & Bulk):**

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

## **WARRANTY—CONDITIONS OF SALE**

OUR DIRECTIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. To the extent consistent with applicable law, Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. To the extent consistent with applicable law, in no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.