



# HORT OIL 98-2

## MITICIDE – INSECTICIDE

ACTIVE INGREDIENT	% By Wt.
Mineral Oil*.....	98.0%
INERT INGREDIENTS.....	2.0%
	100.0%

\*Contains petroleum distillates.

Minimum unsulfonated residue (ASTM D-483) ..... 92.0%

EPA REG. NO. 2935-523

EPA Est. No. 2935-WA-1

### KEEP OUT OF REACH OF CHILDREN

### CAUTION

#### 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.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate and viton. If you want more options, follow the instructions for category G on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators, flaggers, and other handlers must wear:

- long-sleeved shirt and long pants
- shoes plus socks and
- chemical-resistant gloves

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 material 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 WPS for agricultural pesticides [40 CFR 170.240(d)(6)].

FIRST AID	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
If on skin or on clothing:	<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>
If swallowed:	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</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 person.</li> <li>• Do not give any liquid to the person.</li> </ul>
If in eyes:	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
If inhaled:	<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 mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>

**NOTE TO PHYSICIAN:** This product contains petroleum distillates and may pose an aspiration pneumonia hazard.

#### USER SAFETY RECOMMENDATIONS

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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

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 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 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. Read all Directions for Use carefully before applying this product.

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.

#### 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), notification to workers 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 early entry to 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,
- shoes plus socks, and
- chemical-resistant gloves made of any waterproof material.

**MIXING DIRECTIONS:** With agitator running, start filling spray tank with water. When combining with wettable powder or fungicide products, add these products first when tank is 1/3 filled. Add Hort Oil 98-2 when the tank is 1/2 full and while there is sufficient agitation of the mix to achieve emulsification.

Always ensure that agitation is adequate to keep the spray uniformly mixed. If spray solution containing Hort Oil 98-2 sits without agitation for more than five minutes, be sure to flush all spray hoses back into spray tank and agitate for five minutes before resuming spray application. Avoid use in sprayers having hydraulic agitation or those having insufficient agitation to form an emulsion with Hort Oil 98-2.

### **USE PRECAUTIONS AND RESTRICTIONS**

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

To avoid injury to trees, fruit or foliage, observe the following precautions when using spray oils; Do not combine Hort Oil 98-2 with sulfur sprays when applying to foliage or following a sulfur spray on foliage. Avoid applications of sulfur following sprays of Hort Oil 98-2 until sufficient time has elapsed for oil dissipation.

For foliage applications, the spray tank should be free of sulfur residues. After bloom, do not combine with sulfur sprays or injury may result. When finished spraying with oil, clean tanks and system of any residues because oil residues may cause crop injury when combined with some spray materials.

For dormant and Summer oil sprays preceded or followed by applications of other materials that may not be compatible with oil, a sufficient interval needs to be maintained due to the potential for serious leaf and fruit bud injury leading to a reduction in fruit set.

Do not use if emulsion breaks. If the emulsion should break in the spray tank, free oil will float to the surface causing excessive oil deposits at the end of each tank. Severe injury to trees may result if used under these conditions.

When cool, slow drying conditions exist, labeled rates may increase the potential for delayed bud development and/or leaf and fruit bud damage which may result in reduced fruit set. Use lower labeled rates or delay application until weather improves.

Do not apply when temperatures are likely to fall below freezing before the spray has a chance to dry.

Do not apply Hort Oil 98-2 when temperature is below 40°F.

### **SPRAY DRIFT MANAGEMENT**

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

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

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

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

### **GROUND APPLICATION**

Apply using a nozzle height of no more than 4 feet above the ground or crop canopy.

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

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

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.

### **AERIAL APPLICATION**

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.

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

When applications are made with a cross-wind, 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 unsprayed at the downwind edge of the treated field.

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

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

### **USE RATES**

**AERIAL APPLICATION:** When applying Hort Oil 98-2 with aerial equipment, apply 2 to 5 gallons per acre. On young trees or oil susceptible varieties, use the lower rates. Use sufficient water and total gallonage per acre to give thorough coverage.

**APPLES:** Dormant to delayed timing for the control of SAN JOSE SCALE, APHIDS, EUROPEAN RED and BROWN MITE EGGS and GRAPE MEALYBUG.

**Dilute application (200 to 400 gallons per acre):** Use 1 to 2 gallons of Hort Oil 98-2 per 100 gallons of water. Be sure to maintain thorough coverage for adequate pest control. Do not exceed 8 gallons of Hort Oil 98-2 per acre. Consult your local agricultural consultant for specific area rates.

**Concentrate application (25 to 125 gallons per acre):** Use 2 to 5 gallons of Hort Oil 98-2 per acre. On young trees and on oil-susceptible varieties use the lower rate. Consult your local agricultural consultant for specific area rates.

#### *SUMMER APPLICATION TIMING FOR THE CONTROL OF ORCHARD MITES AND SAN JOSE SCALE*

**Dilute application (200 to 400 gallons per acre):** Use 1 to 4 quarts of Hort Oil 98-2 per 100 gallons of water as a dilute spray.

**Concentrate application (25 to 125 gallons per acre):** Use 1 to 3 gallons of Hort Oil 98-2 per acre. On young trees and susceptible varieties use lower rates. Special precautions should be used in Summer oil applications. Summer oil applications have greater potential for plant and fruit damage than pre-bloom applications.

**PEARS:** Dormant to delayed dormant timing for the control of SAN JOSE SCALE, APHIDS, EUROPEAN RED and BROWN MITE EGGS, GRAPE MEALYBUG, a synergist for PEAR PSYLLA insecticides and delay of PEAR PSYLLA egg depositions. If two applications are used pre-bloom at the dormant and delayed dormant timings, then reduce oil rates to the lower labeled amounts.

**Dilute application (200 to 400 gallons per acre):** Use 1 to 2 gallons of Hort Oil 98-2 per 100 gallons of water. Be sure to maintain thorough coverage for adequate pest control.

**Concentrate application (25 to 125 gallons per acre):** Use 2 to 5 gallons of Hort Oil 98-2 per acre. On young trees and oil-susceptible varieties use lower rates.

#### *SUMMER APPLICATIONS FOR THE CONTROL OF ORCHARD MITES, SAN JOSE SCALE AND AS A SYNERGIST FOR PEAR PSYLLA INSECTICIDES*

**Dilute application (200 to 400 gallons per acre):** Use 1 to 4 quarts Hort Oil 98-2 per 100 gallons of water as a dilute spray.

**Concentrate application (25 to 125 gallons per acre):** Use 1 to 3 gallons of Hort Oil 98-2 per acre. On young trees and susceptible varieties use lower rates. Special precautions should be used in Summer oil applications. Summer oil applications have greater potential for plant and fruit damage than pre-bloom applications. At higher elevations and cooler pear growing districts use lower end of labeled rates.

*USE RATE (continued)*

**APRICOTS, CHERRIES, NECTARINES, PEACHES, PLUMS, PRUNES:** Dormant to delayed dormant timing for the control of SAN JOSE SCALE, APHIDS, EUROPEAN RED and BROWN MITE EGGS.

**Dilute application (200 to 400 gallons per acre):** Use 1 to 2 gallons of Hort Oil 98-2 per 100 gallons of water as a dilute spray.

**Concentrate application (25 to 125 gallons per acre):** Use 3 to 5 gallons of Hort Oil 98-2 per acre. On young trees and oil-susceptible varieties use the lower rate.

**GRAPES:** For the control of MEALY BUGS, apply at the rate of 1 gallon per 100 gallons of water. Use 300 gallons of this mixture per acre with thorough coverage of the vines at delayed dormant stage up to bud break.

**For concentrate applications:** Use 3 gallons per acre in 40 to 100 gallons of water.

**WALNUTS (Late spring to Mid-Summer only):** Summer stages of FROSTED SCALE, EUROPEAN FRUIT SCALE, SAN JOSE and other soft-shelled scale, RED SPIDER MITES. Use 2 to 4 quarts of Hort Oil 98-2. The addition of an approved phosphate insecticide aids in scale control. See the phosphate insecticide label for recommended dosages. Do not apply after husk split.

**ORNAMENTAL and SHADE TREES** such as, but not limited to, Pyracantha, Sycamore, Hawthorn, Flowering Peach, Flowering Cherry, Flowering Crab, Apple, Magnolia, Maple, Dogwood, Oak, Privet, Birch, (Conifers and Broadleaf Evergreens – see cautions).

For use on: Soft Brown Scale, Oyster Shell Scale, Brown Apricot Scale, Black Scale, San Jose Scale, overwintering Aphids, Mites and Mite Eggs. Use 1-2 gallons per 100 gallons of water. The higher rate will be more effective. This product may be used as a Summer oil, but test thoroughly on all species intended for treatment prior to commercial use.

**IMPORTANT:**

Do not spray on freshly sheared or pruned plant materials.

Do not use on Conifers and ferns not tolerant to oil sprays.

In colder climates, broadleaf evergreens such as Rhododendrons, Cherry Laurel, Holly, Ivy, Azalea, Oregon Grape, Cotoneaster, Barberry and Yews may be sensitive to oil sprays.

All oil sprays may cause discoloration to blue spruce and blue varieties of Junipers.

Allow sprays to dry before temperatures fall below freezing.

Do not spray at temperatures below 35 degrees Fahrenheit. If handgun has not been used for 20 minutes or longer, recirculate back into the tank until the hose is flushed.

Other insecticides registered for use on ornamentals may be tank-mixed with this product. Read and follow all instructions on the label(s) for the insecticide product(s) used in combination with Hort Oil 98-2.

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store in original container only and keep sealed. Store in closed storage areas. Use caution when moving, opening, closing or pouring.

**Pesticide Disposal:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Disposal:**

**30 gallon Nonrefillable container:** Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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 on 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. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact Ag Container Recycling Council (ACRC) at 877-952-2272 or [rperkins@acrecycle.org](mailto:rperkins@acrecycle.org). If container is not to be recycled, offer it for reconditioning or puncture and dispose of it in a sanitary landfill; or by incineration; or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**5 gallon Nonrefillable container:** Do not reuse or refill this container. Triple rinse container (or equivalent) 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 ¼ 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. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact Ag Container Recycling Council (ACRC) at 877-952-2272 or [rperkins@acrecycle.org](mailto:rperkins@acrecycle.org). If container is not to be recycled, offer it for reconditioning or puncture and dispose of it in a sanitary landfill; or by incineration; or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Conditions of Sale and Limitation of Warranty and Liability:

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using the product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

**ALL STATEMENTS MADE HEREIN ARE SUBJECT TO APPLICABLE LAW, AND TO THE EXTENT THERE IS ANY INCONSISTENCY OR CONTENTION, APPLICABLE LAW SHALL GOVERN.**

The Directions for Use of the product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of many different factors including, without limitation, manner of use or application, weather, combination with other products, or crop conditions. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Manufacturer and Seller harmless from any claims relating to such factors.

**Seller warrants that this product conforms to the chemical description on the label. EXCEPT FOR THIS WARRANTY, THE PRODUCT IS FURNISHED "AS-IS", AND NEITHER SELLER NOR MANUFACTURER MAKES ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE SELECTION, PURCHASE OR USE OF THIS PRODUCT; SELLER AND MANUFACTURER SPECIFICALLY DISCLAIM ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE BEYOND WHAT IS STATED ON THE LABEL. Buyer and User accept all risks arising from any use of this product, including without limitation, uses contrary to label instructions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or Manufacturer**

Neither Manufacturer nor Seller shall be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE BUYER OR USER, AND THE EXCLUSIVE LIABILITY OF MANUFACTURER AND SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT, OR, AT THE ELECTION OF MANUFACTURER OR SELLER, THE REPLACEMENT OF THE PRODUCT.

These Conditions of Sale and Limitation of Warranty and Liability shall be interpreted, unless otherwise required by the law of the state of purchase, in accordance with the laws of the State of California, excluding its conflicts of laws rules, and may not be amended by any oral or written agreement.

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IN CASE OF EMERGENCY,  
CALL CHEMTREC: (800) 424-9300

**NET CONTENTS: 30 gallons**



Manufactured for:

WILBUR-ELLIS COMPANY  
P.O. Box 16458 • Fresno, CA 93755  
(559) 442-1220

Batch Code \_\_\_\_\_