



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (7505P)  
Ariel Rios Building  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460

EPA Reg. Number:  
34704-849

Date of Issuance:  
AUG 18 2010

NOTICE OF PESTICIDE:  
 Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance: Unconditional

Name of Pesticide Product:  
GLACIAL® SPRAY FLUID

Name and Address of Registrant (include ZIP Code):

Loveland Products Inc.  
P.O. Box 1286  
Greeley, CO 80632-1286  
ATTN: Edith Emory, Registration Specialist

5880707 5846504  
676/ 676/1135

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

Based on your response to the Reregistration Eligibility Decision, EPA has reregistered the product listed above. This action is taken under the authority of section 4(g)(2)(C) of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended. Reregistration under this section does not eliminate the need for continual reassessment of pesticides. EPA may require submission of data at any time to maintain the registration of your product.

The Confidential Statement of Formula (CSF) dated "February 19, 2007" for the "Basic Formulation" is accepted and replaces all CSFs previously accepted for this product.

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments in this letter.

See page 2 for required label changes.

Submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after 12 months from the date of this Notice or the next printing of the label whichever occurs first, must bear the new revised label. A stamped copy of the label is enclosed for your records. If you have any questions, contact William Jacobs at 703-305-6406 or [jacobs.bill@epa.gov](mailto:jacobs.bill@epa.gov).

Signature of Approving Official:  
Venus Eagle, Product Manager 01  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

Date:  
AUG 18 2010

### Label Changes

The comments below apply to the label submitted for reregistration of this product on August 11, 2010, and received by the Office of Pesticide programs on August 12, 2010.

1. To limit confusion with the “**If swallowed:**” text, the last sentence of the “**NOTE TO PHYSICIAN:**” (page 1) should be deleted.
2. Make sure that the entry (“½ inch”) in the “**Comments**” column opposite “Plum Prune” in the use table for “**FRUIT AND NUT CROPS**” (page 7) expresses the complete thought intended for that entry. If, for example, the intent is to have the product application occur when there is up to ½ inch of new leaf growth, the entry should state that.
3. Delete “**Note:**” from the paragraph at the bottom of page 7 (below the use table for “**FRUIT AND NUT CROPS**”). In the second sentence of the same paragraph, replace “**Avoid**” with “**Do not**”.
4. In the “**PESTS**” column in the table for “**CITRUS (California Only) – Grapefruit, Lemons ... other citrus hybrids**” (page 8), change “Citicola” to “Citricola”.
5. Edit the second sentence of the “Thorough coverage spray (TC):” paragraph below the table for “**CITRUS (California Only) – Grapefruit, Lemons ... other citrus hybrids**” so that it reads “The total volume needed is dependent on the size of the trees.”
6. The reference to “Ethion 4EC” must be deleted from the “**APPLICATION RATE – GALS GLACIAL SPRAY FLUID**” column of the use table for “**CITRUS (Florida and Texas) – Grapefruit, Lemons ... other citrus hybrids**” (page 9) because the tolerance for Ethion on citrus crops has expired.
7. In the only sentence of the second paragraph below the use table for “**CITRUS (Florida and Texas) – Grapefruit, Lemons ... other citrus hybrids**”, replace “Best results” with “Improved efficacy”.



3/16

**A White Mineral Horticultural Spray Fluid  
For Insect, Mite and Disease Control.**

**ACTIVE INGREDIENT:**

Mineral Oil* .....	By Weight 98.4%
INERT INGREDIENTS: .....	1.6%
	<b>TOTAL 100.0%</b>

\*Contains petroleum distillates  
Unsulphonated Residue . . . 99.00% (minimum)  
Aromatic Composition by ASTM D2140 . . . 0.0%

**KEEP OUT OF REACH OF CHILDREN  
CAUTION  
See Below For Additional Precautionary Statements.**

<b>FIRST AID</b>	
Have the product container label with you when calling a poison control center or doctor or going for treatment.	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Do not give any liquid to a person. Do not give anything to an unconscious person.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</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. 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>
<b>If on skin:</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 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 mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<p><b>NOTE TO PHYSICIAN:</b> Petroleum distillate poses aspiration pneumonia hazard. Only minor irritation should be expected from any type of exposure other than pulmonary aspiration. Ingestion may result in some gastroenteritis and mild diarrhea. Viscosity is such that chemical (hydrocarbon) pneumonia is not a hazard; however, aspiration or lipid pneumonia of a less severe variety could result from pulmonary aspiration. Since systemic toxicity is not expected, the added risk of aspiration from attempts to induce vomiting or lavage are deemed not warranted.</p> <p><b>FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.</b></p>	

ACCEPTED  
With COMMENTS  
In EPA Letter Dated:

AUG 18 2010

EPA REG. NO. 34704-849

EPA EST. NO. 011800-ID-004

Under the Federal Insecticide, Fungicide  
and Rodenticide Act, As amended, for the  
pesticide Registered under EPA Reg. No:

NET CONTENTS 5 GALS. (9.46 L)

34704-849

EXP RED

4/16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION**

Harmful if swallowed or absorbed through skin or inhaled. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. This product is a potential skin sensitizer. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Avoid breathing spray mist. Wash thoroughly with Soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

**Personal Protective Equipment (PPE):**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on the 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 made of barrier laminate, nitrile rubber, neoprene rubber or viton.

**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 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 Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (6)].

<b>USER SAFETY RECOMMENDATIONS</b>	
<b>Users should:</b>	<ul style="list-style-type: none"><li>• Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.</li><li>• Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</li><li>• 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</li></ul>

**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 wash waters. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

**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.

5/16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**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 4 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,
- 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. Keep children and pets out of the treated area until sprays have dried.

**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.

**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 atmospheric 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.

**GROUND EQUIPMENT APPLICATIONS:**

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

**WIND SPEED:** Do not apply at wind speeds greater than 15 mph at the application site.

**DROPLET SIZE:** 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 SPRAY 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 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. **WIND SPEED:** Do not apply at wind speeds greater than 15 mph at the application site.

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

6/16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**MIXING DIRECTIONS**

Use only in equipment with sufficient agitation to keep spray thoroughly mixed. Be sure tank is clean. With agitator running, start filling tank with water; add GLACIAL® SPRAY FLUID when tank is about ½ full. Pump this mixture through the overflow and back into tank for about two minutes. If this mixture turns white, it indicates good emulsification. Fill the tank with water, adding other desired materials as tank is filling. If wettable powders are used, add and thoroughly mix with water before adding GLACIAL SPRAY FLUID. Addition of an emulsifiable formulation should be done after the GLACIAL SPRAY FLUID and water has been thoroughly mixed. Observe all precautions and limitations on labeling of all products used in mixtures. Keep agitator running at all times. If an injector is used, first add 25 to 50 gals. of water to tank with engine running to provide good pressure. Put injector suction tube into the measured amount of GLACIAL SPRAY FLUID, opening injector valve to allow the GLACIAL SPRAY FLUID to be sucked into the tank, then fill the tank with water.

Do not use if this material does not emulsify.

**APPLICATION INFORMATION**

Apply when pests are present and as specified below. Do not use in undiluted form. Sensitive foliage may be injured.

Evergreens: Glacial Spray Fluid may be used on evergreens, taking into consideration the use precautions noted elsewhere on this label. In order for the spray solution to be effective the target pest and plant should be completely covered. Thorough coverage is essential. Best coverage is achieved with ground equipment using proper spray pressure, gallonage per acre, nozzles, nozzle spacing and tractor speed.

For Vegetables/Plant Virus: Spray at no less than 400 psi using ceramic hollow cone nozzles (ALBUZ® ATR (lilac); HCA (green) color or their equivalent). Adjust the angles of the spray nozzles to achieve complete coverage of the foliage including the lower leaf surfaces. Do not exceed the specified maximum rates or apply more than specified.

**Preharvest Interval - GLACIAL SPRAY FLUID may be used up to the day of harvest.**

To ensure thorough coverage, dilute applications (greater than 150 gallons of spray solution per acre) should be used. Concentrate applications (usually from 20 to 150 gallons of spray solution) may reduce the coverage and thus the effectiveness. Application volumes depend on the crop type, crop size and target pest. Adjust the spray volume to obtain the best coverage without runoff. Extreme care should be taken when using concentrate sprays as the potential for enhanced crop phytotoxicity is increased. A concentrate application can provide satisfactory results as long as the spray unit is properly engineered, calibrated and operated.

**AERIAL APPLICATIONS - Dormant and Delayed Dormant Application Only:** Apply 3 to 5 gals. in a minimum of 20 gals. of water per acre. Use only as an emergency application when soil conditions or site does not permit regular ground application.

7/16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**VEGETABLE CROPS**

Crop	Pest	Application Rate (gallons of GLACIAL SPRAY FLUID) per 100 gallons of water	Comments
Asparagus	Aphids	0.75-1	For virus control on cucurbits use 0.75 gallons per 100 gals. Spray 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 400 psi and ceramic hollow cone nozzles.
Beans	Mites		
Beets	Beetle Larvae		
Cabbage	Leafminers		
Cauliflower and other Cole crops	Thrips		
Celery	Leafhopper		
Corn	Whitefly		
Cucurbits			
Eggplant			
Lettuce			
Melon			
Pepper			
Potato			
Pumpkin			
Radish			
Squash			
Sweet Potato			
Tomato			
Herbs and Spices			
Curly Leaf Basil			
Lemon Balm			
Mexican Oregano			
Mint			
Oriental Vegetables			
Acerola, Atemoy,			
Balsam pear (Bitter melon), Carambola,			
Chinese broccoli			
(Gai Lon), Chinese			
cabbage (Gai			
Choy), Chinese			
spinach, Chinese			
waxgourd, Cilantro,			
Citron melon,			
Dasheen, Ginger,			
Ginseng, Japanese			
artichoke, Japanese			
radish (Daikon),			
Rambutan			

8/16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**FRUIT AND NUT CROPS**

<b>Crop</b>	<b>Pest</b>	<b>Application Rate (gallons of GLACIAL SPRAY FLUID) per 100 gallons of water</b>	<b>Comments</b>
Almond Apricot Cherry Pistachio	Mites (eggs) San Jose Scale	2	Dormant or Delayed Dormant
	Fruit Tree Leafroller (eggs)	3	
	Mites Scales	1-1.5	Summer (foliar or cover) or postharvest. Do not spray oil sensitive varieties. Do not apply to trees lacking moisture.
Apple	Aphid (eggs) Apple Red Bug Mite (eggs) Scales	2	Dormant to delayed dormant to ½ inch green.
	Fruit Tree Leafroller (eggs)	3	
	Mites	1-2	Summer (foliar or cover). Do not spray oil sensitive varieties.
Avocado Hass variety only	Avocado Brown Mite Thrip Praceae Mite	0.75-1	Apply through late fall. Consult with your local University of California Cooperative Extension Service for proper timing and application parameters.
Bananas Plantains	Black Leaf Streak ( <i>Mycosphaerella fijiensis</i> ) Black Sigatoka ( <i>Mycosphaerella fijiensis</i> var. <i>difformis</i> )	0.5-1.5  (Mist Blower: 1½ gals. in a minimum of 6 gals. water per acre.)	Begin application when disease first appears and continue every 10 to 15 days during rainy periods or as needed. Do not apply when daytime temperatures exceed 80°F as injury may occur. Phytotoxicity may be affected by the quantity of oil used, vigor of trees and temperature at the time of application. Bag fruits or avoid direct spraying on unbagged fruits. This application is also effective in loosening Sooty Mold Fungus and in preventing its formation by the control of Aphids, Mealybugs, Scales and Whitefly.
	Yellow Sigatoka ( <i>Mycosphaerella musicola</i> )	1-1.5	
Blueberries* Bushberries* Caneberries	Mites Powdery Mildew Rust	0.75-1.5	Using ground equipment, spray for optimum coverage of leaf surfaces. For fungal diseases use at least 200 psi spray pressure.
Figs	Fig Scale	1-3	Dormant or Delayed Dormant
	Mites Mealybug Scale	1-2	Foliar Spray
Grapes	Mealybugs Mites Leafhopper* Whiteflies*	1-2	Using ground equipment, spray for optimum coverage of leaf surfaces. Repeat sprays every 10-14 days.
	Powdery Mildew		<b>For powdery mildew</b> - Make first application pre-bloom and continue every ten days to three weeks depending on level of disease pressure. Use higher rate and/or shorter spray interval when disease conditions are severe. Oil will remove the bloom on grapes. Table grapes should not be sprayed within 60 days of harvest. On grapes, <b>do not tank mix</b> oil and copper more than once/season. Do not use copper and oil together with fruit present.



9/16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**Fruit and Nut Crops cont'd.:**

<b>Crop</b>	<b>Pest</b>	<b>Application Rate (gallons of GLACIAL SPRAY FLUID) per 100 gallons of water</b>	<b>Comments</b>	
Kiwi	Latania Scale	Use 4 to 6 gallons of oil in a minimum of 100 gallons of water per acre. Use higher rate when scale populations are high.	Do <u>not</u> apply after budbreak. Do <u>not</u> use on weak or stressed vines, or where soil moisture is inadequate.	
	Greedy Scale			
	Oleander Scale			
	San Jose Scale			
Mango	Mites	Use 1 to 1.5 gallons of oil in 100 gallons of water per acre.	Apply every 2 to 3 weeks as necessary depending on level of pest pressure.	
	Powdery Mildew			
Olive	Mites Scales	1.5	Prebloom to Postbloom Buckshot.	
Papaya	Mites	Use 0.75 to 1.5 gallons in 100 gallons of water per acre.	For Powdery Mildew/Mites: Spray every 10 to 14 days depending on the level of pest pressure. For Virus: Initiate spray when seeds are germinated. Spray weekly using 400 psi spray pressure and ceramic hollow cone nozzles.	
	Powdery Mildew			
	Papaya Ringspot			
	Virus			
Peach Nectarine	Aphid (eggs)	2-3	Dormant or Delayed Dormant Use higher rates for leafroller and scales.	
	Mite (eggs)			
	Fruit Tree Leafroller (eggs)			
	San Jose Scale			
Pear	Mites	1-2	Summer (foliar or cover) or postharvest.	
	Scales			
	Mite (eggs)	2		Dormant or Delayed Dormant (up to and including petal fall).
	Pear Psylla			
Scales	3	Summer (foliar or cover) or postharvest. Do not spray oil sensitive varieties.		
Fruit Tree Leafroller (eggs)				
Pecan	Mites		1-2	Dormant Do not apply to sensitive varieties or after husk split.
	Pear Psylla			
	Aphid (eggs)	3		
	Mite (eggs)			
Pineapple	Mealybugs	<b>Spray</b> - Use 1 to 2 gallons of oil in 100 gallons of water per acre <b>Dip</b> - Use 1 to 2 gallons of oil in 100 gallons of water, dip for 30 seconds.	Allow fruit to dry for 1 hour before being stored.	
	Bud Moth			
	Chinese Rose			
	Beetle			
Plum Prune	Aphid (eggs)	1.5-2	½ inch Summer (foliar to cover) or postharvest. Do not apply to certain fresh market fruits after bloom starts to form as the oil spray will remove the waxy bloom. Do not spray oil sensitive varieties.	
	Mite (eggs)			
	Scales	1-1.5		
	Mites			
Strawberries	Scales	0.75	Spray at no less than 400 psi using ceramic spray nozzles (ALBUZ® ATR, lilac color or their equivalent).	
	Leafminers*			
	Mites			
Walnut	Powdery Mildew	1-2	Delayed Dormant Do not apply to sensitive varieties or after husk split.	
	Mite (eggs)			
	Scales			

\*Asterisk denotes crop, pest Not approved in California.

**Note: Use efficient equipment of the proper type. Avoid spraying during or immediately prior to hot or freezing weather (over 95°F or under 32°F), hot dry winds, rain or other unsuitable conditions; avoid over spraying or double spraying. Plants should be sprayed only when in vigorous condition and when their moisture condition is suitable. Before using, make certain spray tank is free**

10/  
16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

of sulfur residues. Do not apply sulfur within 14 days except in the Northwest (Oregon and Washington) where it may be used in combination on Pears as a Post Harvest (after old fruit is off the tree), Dormant and Delayed Dormant (before the scales slip, or at or prior to bud swell) treatment and on Apples prior to or up to the Delayed Dormant (½ inch green) period. In areas west of the Continental Divide do not apply to Captan treated trees within 90 days after or 60 days before this oil. In areas east of the Continental Divide do not apply to Captan treated trees within 10 to 14 days before and after this oil. If in doubt, spray a portion of one tree previously treated with Sulfur or Captan using 1 quart to 25 gallons water. Burn will show in several days if sufficient time has not elapsed.

**This product has not been tested on all species or varieties. Before treating a large area, treat a small area and observe prior to full scale application.**

A period of 14 days must elapse before any of the following chemicals are used before or after an application of GLACIAL SPRAY FLUID: chlorothalonil, dicloran, dicofol, permethrin.

Do not use chlorothalonil or dimethoate in a spray program with GLACIAL SPRAY FLUID on grapes, ornamentals and strawberries. Do not use dicofol in a spray program with GLACIAL SPRAY FLUID on ornamentals and strawberries. Do not use propargite with an oil spray or within 30 days before or after an oil spray.

**CITRUS: (California Only) - Grapefruit, Lemons, Limes, Oranges (Navel and Valencia), Tangelos, and Tangerines and other citrus hybrids**

<b>PESTS</b>	<b>APPLICATION RATE &amp; TIMING</b>	<b>COMMENTS</b>
Mites -Citrus Red -Citrus Rust	Apply ½ to 1½ gals. of oil per 100 gals. of water as thorough coverage spray (TC). Alternately, use a low volume spray (LV) to apply 1 to 10 gals. of oil per acre.	
Scale Insects -Black -Brown Soft -Citicola -Purple -Red -Yellow	Apply up to 10 gals. of oil per acre on bearing trees up to 10 feet in height. Add 1 gal. of oil per acre for each foot of height over 10 feet. Apply as a low volume spray (LV) 1 to 10 gals. of oil per acre.	<b>For Lemons, Limes, Grapefruit and Oranges (Navels and Valencias).</b>

Thorough coverage spray (TC): Applications achieving a uniform film wetting of all portions of the tree at 250 to 2000 gallons of spray solution per acre. The total volume is dependent of the size of the trees. Do not exceed a maximum of 212 pounds of active ingredient (in a maximum volume of 2000 gallons of spray mix per acre) when treating citrus in California (based on thorough coverage spray, with 1½ gallons of product mixed per 100 gallons of water).

Low-volume spray (LV): Applications with droplet depositions achieved on all interior and exterior parts of the tree using 10 to 100 gallons of spray solution per acre.

Do not make an oil spray application within 2 weeks prior to or after an application of sulfur. On Citrus do not make an oil application within 60 days prior to or after an application of sulfur. Do not apply prior to or during period of excessively high summer temperatures. Do not apply oil spray when trees show stress. Consult with your local University of California Cooperative Extension Specialist for proper timing and spray program.

11/16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**CITRUS: (Florida and Texas) -Grapefruit, Lemons, Limes, Oranges, Tangelos and Tangerines and other citrus hybrids**

<b>PESTS</b>	<b>APPLICATION RATE-GALS. GLACIAL SPRAY FLUID</b>	<b>COMMENTS</b>
Citrus Rust Mite	5 to 10 gals. per acre. Apply as a dilute spray.	<b>Does not control Citrus Snow Scale.</b>
Spider Mites	5 to 10 gals. per acre. Apply as a dilute spray.	
Scale Insects	5 gals. per acre + 6 pints Ethion 4EC.	<b>Summer spray only.</b> <b>Observe all applicable precautions on Ethion label.</b> <b>Do not apply to Navel oranges</b>
-Black Soft -Brown Soft -Chaff -Glover -Purple -Red -Yellow	Apply as a dilute spray.	
-Black Soft -Brown Soft -Chaff -Glover -Purple -Red -Yellow	Scale Insects	5 to 10 gals. per acre. Apply as a dilute spray.
Whitefly	5 gals. per acre. Apply as a dilute spray.	
Greasy Spot (Grapefruit)	5 gals. per acre. Apply as a dilute spray.	<b>Tank mix with sufficient copper fungicide to provide 4 lbs. per acre of metallic copper.</b>
Greasy Spot (all other varieties)	5 to 10 gals. per acre. Apply as a dilute spray.	<b>If disease pressure is severe, tank mix 4 lbs. (metallic) copper per acre. Do not exceed 5 gals. oil if copper used.</b>
Loosening sooty mold	5 to 10 gals. per acre. Apply as a dilute spray.	<b>Use higher rate when disease pressure is heavy.</b>

Dilute spray: Apply the GLACIAL SPRAY FLUID application rate in up to 1500 gallons of water per acre, or 10 to 11.6 gallons per tree, to over 15 gallons per tree for large trees. Do not exceed a maximum of 159 pounds of active ingredient (in a maximum volume of 1500 gallons of spray mix per acre) when treating citrus in Florida and Texas (based on dilute spray, with 1½ gallons of product mixed per 100 gallons of water).

Best results can be obtained when the GLACIAL SPRAY FLUID is added to a partially filled spray tank under proper agitation and all foliage is thoroughly covered.

Precautions in the use of GLACIAL SPRAY FLUID include: Do not apply GLACIAL SPRAY FLUID when trees are wilting. Do not apply GLACIAL SPRAY FLUID and sulfur within 3 weeks of each other in Florida or Texas. GLACIAL SPRAY FLUID applied after October 1 may increase susceptibility of trees to cold damage and may reduce the fruit crop the following year. GLACIAL SPRAY FLUID applied in the fall may inhibit solids formation in the juice and retard coloring of fruit and should not be applied within 60 days of anticipated harvest. Sensitive foliage may be injured.

Florida growers consult the Florida Citrus Spray and Dust Schedule, or your Agricultural Experiment Station or State Extension Service Specialist for complete details on the spraying program best suited to your locale. Texas growers consult with your Agricultural Experiment Station or State Extension Specialist for complete details on the spraying program suited to your locale.

**COFFEE**

<b>PESTS</b>	<b>APPLICATION RATE-GALS. GLACIAL SPRAY FLUID</b>	<b>COMMENTS</b>
Green Scale	Use 3 to 6 gallons in 100 gallons of water per acre. Use only water as a diluent.	Apply when insects appear and treat as necessary at 30 to 60 day intervals. Do <u>not</u> exceed 18 gallons of oil per acre in a growing season. Do <u>not</u> apply within 30 days of harvest when berries are handpicked. Oil residues make picking difficult.

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**ORNAMENTALS**

<b>Crop</b>	<b>Pest</b>	<b>Application Rate (ounces per gallon of water)</b>	<b>Comments</b>
Foliage Ornamentals & Bedding Plants	Aphids Adelgids	1-2.5 oz. per gallon	Summer (Foliar or Cover): Do not spray plants during flowering.
Shade Trees** and Shrubs Including Conifers, Deciduous Broadleaf Evergreens & Woody Ornamentals	Aphids Adelgids Eriophyid Mites Gall Mites Honey Locust Plant Bug Lace Bug	<b>Winter Dormant Period:</b>  2.5-4 oz. per gallon	<b>RESTRICTION:</b> Spray no more than 4 times during the growing season; Use a 2 week minimum application interval. Do not spray when there is obvious moisture deficit in leaves, or the plant is under stress. For fall dormant applications, reduce rate to 2 gallons oil per 100 gals. water and limit use only to: American Red Oak, Japanese Black Pine, Dogwood, Weeping Cherry, Cornelian Cherry, Crabapple, Norway Maple, Purple Plum. <b>NOTE:</b> May cause discoloration of Blue Spruce. Do not use on conifers or ferns not tolerant to oil sprays. Use enough spray solution to completely penetrate the leaf canopy and cover both top and bottom of all of the leaves and stems until wet but without significant runoff.
Ornamental Trees** Shrubs along city Streets, other rights-of-way including Conifers, Deciduous and Broadleaf Evergreens	Leaf Beetle (larvae) Leafminer Leafrollers Mealybugs Psyllids (immature) Red Mites Sawfly (larvae) Scales (immature) Spider Mites Webworms Whiteflies	<b>Summer (Foliar or Cover):</b>  1-2.5 oz. per gallon	
Flowering and Foliage Plants including Roses and other Flowering Shrubs	Same as above	<b>Winter Dormant Period:</b>  2.5-4 oz. per gallon	Do not spray during flowering.
Christmas Trees **	Scale (soft & hard) (immature)	2-3	Winter
	Spider Mites	0.75-2	Summer

Use a lower concentration for more sensitive plants.

\*\* GLACIAL SPRAY FLUID removes the glaucous (blue) bloom from such evergreens as Colorado Blue Spruce and Koster Spruce. Always use lower dosage or test spray oil sensitive plants such as Cryptomeria, Smoke Tree, Chamaecypris, Juniper, Japanese Holly and Spruce. Tendency toward sensitivity: Red Cedar and Douglas Fir.

**GREENHOUSE AND OUTDOOR**

**Frequency of Application:** For the greenhouse pests listed, use once a week initially, then as the pest is controlled, decrease the frequency to every 2-3 weeks as needed. Application safety during bloom period should be determined for each individual species of plant to be treated by conducting a small test.

<b>Crop</b>	<b>Pest</b>	<b>Application Rate (gallons of GLACIAL SPRAY FLUID) per 100 gallons of water</b>	<b>Comments</b>
Ageratum Crown of Thorns Dieffenbachia Ferns Ficus Lisianthus Orchid Palms Petunia Poinsettia Schefflera Sunflower	Aphids Fungus Gnats Leafminers Mealybugs Scales (soft & hard) Spider Mites Thrips Whitefly	0.5-1	Due to varietal differences in response to a treatment of GLACIAL SPRAY FLUID at the specified rates, conduct a small test on 1 or 2 plants of the specific variety to be treated.

13/  
16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

**Greenhouse and outdoor cont'd.:**

**Frequency of Application:** For the greenhouse pests listed, use once a week initially, then as the pest is controlled, decrease the frequency to every 2-3 weeks as needed.

Application safety during bloom period should be determined for each individual species of plant to be treated by conducting a small test.

<b>Crop</b>	<b>Pest</b>	<b>Application Rate (gallons of GLACIAL SPRAY FLUID) per 100 gallons of water</b>	<b>Comments</b>
Leaf Polish for hardy plants		1	
Aglaonema	Aphids	1-2	Due to varietal differences in response to a treatment of GLACIAL SPRAY FLUID at the specified rates, conduct a small test on 1 or 2 plants of the specific variety to be treated.
Aster	Fungus Gnats		
Azaleas	Leafminers		
Begonias	Mealybugs		
Browallia	Scales (soft & hard)		
Camellias	Spider Mites		
Carnation	Thrips		
Celosia	Whitefly		
Chrysanthemum			
Coleus			
Cosmos			
Dusty Miller			
Easter Lilies			
Gardenias			
Gerbera			
Helichrysum			
Hibiscus Foliage			
Hydrangea			
Jade Plant			
Marigold			
New Guinea Impatiens			
Nicotonia			
Philedendron			
Portulaca			
Reiger Begonias			
Snapdragon			
Zinnias			

Some plants are more sensitive to oil treatments if any of the following conditions are present when application is made: 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.

**FIELD CROPS**

<b>Crop</b>	<b>Pest</b>	<b>Application Rate (gallons of GLACIAL SPRAY FLUID) per 100 gallons of water</b>	<b>Comments</b>
Corn (sweet & field)	Aphids	<b>Corn:</b> 1-2 <b>Sugar Beets:</b> 2	
Sugar Beets	Mites		
	Leafminers		
	Corn Earworm		
	Rootworm		
	Armyworm		
	Whitefly		
Hops*	Mites	1-2	<b>For powdery mildew:</b> Initiate sprays at early leaf stage. Continue sprays every 10-14 days. <b>Mite control</b> will be effective under the same spray interval as powdery mildew sprays. Discontinue sprays at burr development.
	Powdery Mildew		

14/  
16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

*Field Crops cont'd.:*

Crop	Pest	Application Rate (gallons of GLACIAL SPRAY FLUID) per 100 gallons of water	Comments
Tobacco	Aphids Mites Beetle Larvae Leafminers Thrips Leafhopper Whitefly	0.75-1	

\*Asterisk denotes crop, pest Not approved in California.

**This product has not been tested on all species or varieties. Before treating a large area, treat a small area and observe prior to full scale application.**

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**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 this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. 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 The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). If not recycled, then puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For packages up to 5 gallons: 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. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 5 gallons and less than 56 gallons:** 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 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. **Pressure rinse as**

15/16

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

***Storage & Disposal cont'd.:***

**follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For packages greater than 56 gallons:** 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 percent 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.

**For refillable containers:** 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 percent 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. Offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.**

**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.

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16/  
116

**GLACIAL® SPRAY FLUID**  
**EPA REG. NO. 34704-849**

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