Total a

# SUN SUNSPRAY 6E PLUS

# A superior horticultural spray oil for insect and mite pest management

Active Ingredient:	Paraffinic Oil*	98.8%
Inert Ingredient:	Emulsifier	1 2%
*Unsulfonated Res	idue of Paraffinic Oil	92.0% Min.
*50% Distillation P	oint of Paraffinic Oil	414 <sup>0</sup> F
*10%-90% Distillat	ion Range of Paraffinic Oil	65 <sup>0</sup> F Max
*Flash Point	- 	3450 F
	*****	7.1 lbs

### CAUTION

# KEEP OUT OF REACH OF CHILDREN PRECAUTIONARY STATEMENTS

Hazards to humans and domestic animals: Avoid contact with eyes, skin and clothing. See side panel for additional precautionary statements.

Harmful if swallowed.

Avoid breathing of spray mists or vapors.

Wash hands after using.

Avoid contamination of feed and foodstuffs.

# ACCEPTED

APR 1 2 1991

Under the Federal Insacticide, Fungicide, and Redentuade Act, as amended, for the pesticide registered under EPA Reg. No.

## STATEMENT OF PRACTICAL TREATMENT

If swallowed:

Do not induce vomiting. Call a physician immediately.

If on skin:

Wash with soap and water.

If in eyes:

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Flush with water.

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters. Apply this product only as specified on this label.

EPA Registration No. 862-23

EPA Est. No.

Net Contents: 1 Quart, 2 Quarts, 1 Gallon, 2.5 Gallons, 5 Gallons, 30 Gallons, 55 Gallons (Also Bulk)

Sun Refining and Marketing Company
Ten Penn Center, 1801 Market Street, Philadelphia, PA 19103

STORAGE AND DISPOSAL

- 1. Prohibitions: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.
- 2. Storage: Store in a cool, dry, locked area out of the reach of children. Keep oil container tightly closed in storage to prevent entry of water.
- 3. Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
- 4. Container Disposal: Plastic: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or 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.

  Metal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

#### **USE PRECAUTIONS**

Keep oil container tightly closed in storage to prevent entry of water. All horticultural oils interfere with or slow plant transpiration and respiration during the period of evaporation. Phytotoxicity may result if sprayed to plants during periods of prolonged high temperature and high relative humidity. Do not spray to plants under moisture stress.

Do not use this product with dimethoate (Cygon), or fungicides such as captan (Captan), anilazine (Dyrene), folpet (Folpet), dinocap (Karathane), oxythioquinox (Morestan).or any other product containing sulfur. If possible, either keep the spray equipment used for these compounds separate from the equipment used for oil, or make sure that the sprayer is thoroughly cleaned so that no residue from these compounds remain. Do not use with dimethoate or Sevin 50W formulation (carbaryl) on deciduous fruit trees.

#### 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.

#### MIXING INSTRUCTIONS

- 1. Add sufficient water to the mixing tank to allow proper agitation by pump or paddles.
- 2. Add other desired pesticides. If wettable powder formulation, mix the water and powder thoroughly so that the powder is totally suspended in the water before the oil is added. If other pesticide to be added is an emulsifiable formulation, do so after the oil and water has been thoroughly mixed.
- 3. Add oil under agitation when tank is 3/4 full. Top off with water to form milky solution.
- 4. Maintain agitation until solution is used.
- 5. In small equipment lacking agitators, stir or shake diluted spray frequently during application.
- 6. It is important for users to read and follow all directions and restrictions on the labels of the proposed tank mix products.
- 7. Flush fluid in sprayer hose lines back into tank reservoir if fluid is allowed to stand for more than 20 minutes.

GENERAL INFORMATION

This product controls adelgids, aphids, lace bugs, leafhoppers, leafminers (larvae), mealybugs, mites, plant bugs, psyllids, sawfly larvae, scales, whitefly and eggs of aphids, mites and certain caterpillars on vegetables, fruits, tree nuts, certain field crops, shrubs, trees, greenhouse plants, ornamental foliage plants and flowers. This product can be applied up to harvest.

## APPLICATION INSTRUCTIONS

The target pest must be completely covered with spray. Oil residue on the plant surface often acts as a feeding and oviposition deterrent. However, the primary target is the pest itself as oil is a contact pesticide.

DILUTE APPLICATIONS (greater than 150 gallons spray per acre) in most cases, ensure the best coverage.

CONCENTRATE APPLICATIONS (usually from 45 to 125 gallons spray per acre) may reduce coverage and effectiveness. Concentrate application includes the use of low volume (from 10 to 100 gallons spray per acre) air-blast or air-carrier sprayers. A concentrate application can provide satisfactory results as long as the spray unit is properly engineered, calibrated and operated. Speed of travel for ground application is extremely important. Tractor speed from 1 M.P.H. to 4 M.P.H. is recommended depending on crop, crop size and target pest.

AERIAL APPLICATIONS Use only as an emergency application when soil conditions do not permit regular ground application. Helicopter only. Apply quantity of product shown for each listed crop for control of listed insects in sufficient water to make a minimum of 20 gals. dilute spray per acre.

#### TIMING THE TREATMENT

Applicator must determine the precise timing to fit local growth and climatic conditions.

DO NOT EXCEED MAXIMUM RATES OR APPLY MORE OFTEN THAN RECOMMENDED.

MAY BE USED UP TO DAY OF HAVEST.

USES

TANK MIXES: SunSpray 6E Plus may be mixed with with other pesticides to improve the level of kill or enhance coverage. Products with which SunSpray may 53 tank mixed include, but are not limited to, <u>Bacillus thuringiesis</u>, pyrethrum, malathion, and avermectin. Users should read and follow all directions and restrictions on the labels of the proposed tank mix products.

#### **RE-ENTRY STATEMENT**

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

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Written or oral warnings must be given to workers who are expected to be in treated areas or in an area about to be treated with this product. When oral warnings are given, warning shall be given in a language customarily understood by workers. Written warnings must include the following information: "CAUTION-Area treated with Sunspray 6E Plus on (date). Do not enter without appropriate protective clothing until sprays have dried." In case of accidental exposure, refer to Statement of Practical Treatment found on this product label.

#### **TERMS**

Seller's guarantee shall be limited to the terms of the label and, subject thereto, the buyer/user accepts the product on these conditions. Timing and method of applications, 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.

Note: This pesticide is to be sold ONLY in this original unbroken container.

Table 1A

		Applic	cation Rate- G	als Oil	
		Dilute Spray	Concentrate	Aerial*	Time of Application
Crop	Pest	Per 100 Gal.	Per 20-125	Min. 20	(Stage of Develops
	<u> </u>	Water	Gal. Water _	Gal. Spray	
Apples	Aphids (eggs)	2	6-8	6-8	Dormant or Delayer
	Bugs (immature) Including Apple Red Bug	2	6-8	6-8	to 1/2" Green
	Mites (eggs) Including European Red Mite	2	6-8	6-8	
	Scales (hard, soft)	2	6-8	6-8	
	Scurfy Scale	3	6-8	6-8	
	Fruit Tree Leaf Roller (eggs)	3	6-8	6-8	
	Mites	1	4	4	Summer (Foliar or
	Scales	1-2	4	4	Post Harvest. Do Not Apply Over Waxy Bloom Forms
Pears	European Red Mite (eggs)	1-2	4-6	4-6	Dormant or Delayer
	Pear Leaf Blister Mite	3	4-6	4-6	(Up To And Include
	(eggs)		4-6	4-6	Fall).
	Pear Psylla	2	4-6	4-6	
	Scales	2	4-6	4-6	
	Fruit Tree Leaf Roller (eggs)	3			
	Two-Spotted Spider Mite	1	4	4-6	Summer (Foliar or
	Brown Mite	1	4	4-6	Post Harvest.
	Pear Rust Mite	1-2	4-6	4-6	
	Pear Leaf Blister Mite	1.5-2	4-6	4-6	
	Pear Psylla	1.5-2	4-6	4-6	
	Thrips	1.5-2	4-6	4-6	

<sup>\*</sup>Aerial application should be used only as emergency application when soil conditions do not permit regular ground application (helicopter only).

Table 1B

		Applic	cation Rate- G	ials Oil	
Crop	Pest		Concentrate Per 20-125 Gal. Water	Aerial* Min. 20 Gal. Spray	Time of Application (Stage of Development)
Almonds Apricots Cherries	Aphids (eggs) Bugs (immature) Tent Caterpillars Fruit Tree Leaf Roller (eggs) San Jose Scale	2-3	6-8	6-8	Dormant or Dalayed Dormant  Dormant
	Mites and Scales	1-1.5	4-6	4-6	Summer (Foliar or Cover) or Post HarvestApplication Should Not Be Made Over Oil Sensitive Varieties -Do Not Apply To Trees Lacking Adequate Moisture.
Peach Nectarine	Aphids (eggs) Bugs (immature) Fruit Tree Leaf Roller (eggs) Mites (eggs) Peach Twig Borer (hibernaculae)	3	6-8	6-8	Dormant or Delayed Dormant
	Cottony Peach Scale San Jose Scale	2	4 - 6		Dormant
	Mites and Scales	1-2	4 - 6	4-6	Summer (Foliar or Cover) or Post Harvest.

<sup>\*</sup>Aerial application should be used only as emergency application when soil conditions do not permit regular ground application (helicopter only).

Table 1B (cont.)

			ation Rate- G	als Oil	_]
Crop	Pest	Dilute Spray Per 100 Gal. Water	Concentrate Per 20-125 Gal. Water	Aerial* Min. 20 Gal. Spray	Time of Application (Stage of Development)
Plums Prunes	Aphids (eggs) Scales Mites (eggs) Peach Twig Borer (Hibernaculac)	1.5-2	6-8	6-8	Dormant or Delayed Doirnant to 1/2" green Tip
	Mites Scales	1-1.5	4-6	4-6	Summer (Foliar or Cover) or Post Harvest Do Not Apply Over Certain Fresh Market Fruits After Bloom Starts To Form As The OI Spray Will Remove The Wavy Bloom - Application Should Not Be Made Over OI Sensitive Varieties
Pecans	Aphids (eggs) Scales Mites (eggs)	3	6-8	6-8	Dormant
	Aphids Mites	1-1.5	4-6	4-6	Summer (Foliar or Cover) or Post Harvest.
Walnuts	Aphids (eggs) Scales Mites (eggs)	4-6	- 0 -	- 0 -	Delayed Dormant -Use Only On Trees That Have Not Suffered From Lack Of Moisture At Any Time During The Growing Season -Do Not Apply To Orchards Where Soil Moisture Is Low. Trees Must Have Been Fully Dormant
	Mites	4-6 (200 Gal Water/Acre)	- 0 -	- 0 -	Foliar- Late Spring To Early Summer-When Leaves Are Fully Expanded.

<sup>\*</sup>Aerial application should be used only as emergency application when soil conditions do not permit regular ground application (helicopter only).

Table 1C

		Application Ra	te- Gals. Oil	
Сгор	Pest	Dilute Spray Per 100 Gal. Water	Low Volume* Spray Per 80- 125 Gal.Water	Comments
Lemons and Grapefruit	Mites Scales Including Calif. Red Scale	1.0-1.4 1.0-1.6	10-20	For Best Results, Spray During Fall, Early Winter & Spring Months When Red Scale Are More Easily Controlled And Trees Generally Less Reactive To Oils. For All Citrus Oil Sprays, Ensure Adequate Soil Moisture; Leaves Should Not Wilt Before Noon.
Navel* & Valencia Oranges, Other Citrus Varieties Including Non-Bearing	Mites Including Rust Mite Spider Mite Scales Including Black Scale Calif. Red Scale Whitefly & Blackfly Sooty Mold	1.0-1.4 1.0-1.3 1.3-1.6 1.0-1.3 1.0-1.3	10-20	For Low Volume Oil Spray Treatment During The Spring, Application Should be Discontinued As Soon As Temperatures Go Above 90 F During The Day Or Relative Humidity Is Expected To Go Down To 20 Percent Or Below.Oils Applied After Oct. May Increase Cold Damage To Trees. Oils Applied In Aug. & Sept. May Affect Solids Content And Retard Coloring. The Addition Of A Tank Mix Pesticide Will Improve Performance Against Scales.

<sup>\*</sup>Low volume applications require a minimum of 10 gallons of oil per acre for trees up to 10 feet in height plus 1 gallon per acre for each additional foot of average tree height. For navels, with the development of bloom, the amount of spray oil added to the 10 gallon-per-acre dosage for trees taller than 10 feet, in gallons per acre additional foot of average tree height, should be reduced to 3/4 gallon and then to 1/2 gallon at petal fall and postbloom through the June drop period.

Table 2
Shade Trees, Shrubs, Ornamentals, Flower & Foliage Plants, Christmas Trees

Shade Trees, Shrubs, Ornamei	itais, riower a rollage	Plants, Christmas Trees	
Crop or Piant	Pest	Gal. Oil Per 100 Gal. Water	Time of Application
Shade Trees' And Shrubs	Aphids	2-4	Winter Dormant
Including Conifers, Deciduous	Adelgids		Period As Needed
Broadleaf Evergreens And Woody	Bugs (immature)		
Ornamentals	Certain Caterpillars		
	Eriophyid Mites	1 - 3	Summer (Foliar Or
Ornamental Trees*	Gall Mites		Cover) As Needed
Shrubs Along City Streets, Other	Lace Bug		
Rights-Of-Way Including Conifers,	Leaf Beetle Larvae		
Deciduous and Broadleaf	Leaf Miner		
Evergreens	Mealybug	<u></u>	
	Psyllids (immature)	2-3	Winter Dormant
Flowers & Foliage Plants	Sawfly (larvae)		Period As Needed
Including Roses And Other	Scales (immature)		
Flowering Shrubs.	Spider Mites		
Foliage Ornamentals And Bedding	Thrips	I-2 Gals.	Summer (Foliar Or
Plants.	Whiteflies (immature)		Cover) As Needed
Christmas Trees*	Aphids	2-4 Gals.	Winter
	Adelgids		
	Scale (soft & hard) (immature)	1-3 Gals.	Summer
10il commune the plants (black ble	Spider Mites	Coloreda Otto Conso	Kanaa Camaa Alaa

\*Oil removes the glaucus (blue) bloom from such evergreens as Colorado Blue Spruce and Koster Spruce. Always use lower dosage or test spray oil sensitive plants such as crytomeria, smoke tree, chamaecypris, juniper, japanese holly and spruce. Tendency toward sensitivity: red cedar and douglas fir. Do not spray walnut foliage.

Caution: Spray no more than 4 times during the growing season; two week minimum application interval. Do not spray when buds have fully opened and shoot elongation is occurring. Do not spray when there is obvious moisture deficit in leaves, or the plant is under stress. Fall dormant treatments are not recommended. Keep away from open blooms- bleaching and spotting has been observed with the open blooms of certain plants.

Table 3

Small fruits

Crops	Pest	Gal. Oil Per 100 Gal Water	Time of Application
Caneberries	Aphids	2	Dormant
	Leafhopper	1	Spring-Summer (Foliar)
	Mites	2	Post Harvest
•	Whitefly (immature)		
	Psyllid		
Cranberries	Leafhopper	1-2	As Needed
	Scale		
Blueberries	Thrips		Foliage
u.	Mites	2	Foliage
•	Sawfly (eggs)	2	
	Scales	3	Dormant
Strawberries	Aphids	1	Dormant and Foliage
	Mites		<u>L</u>

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Plants	Pest	Gals. Oil Per 100 Gal Water_	Tablespoons Oil in 1 Gal. Water	Comments
Chrysanthemum Diffenbachia Dracaena Ferns Ficus Gardenias Jade Plant Palms Philodendron Pothos Schefflera	Aphids Leafminers Mealybugs Scales Spider Mites Whitefly (immature)	1-2	2.5-5.0	Do Not Apply To Plants In Direct Sunlight Behind Glass. Do Not Use On Coconut Palms And Maidenhair Ferns. Chrysanthemum Blooms Have Shown Phytotoxic Symptoms At The Higher Rate. Applicator Should Conduct A Test For Phytotoxicity By Treating A Few Specimens Before Making A Large- Scale Application.

<sup>\*</sup>Protect floor, floor coverings and furnishings from overspray.

#### Miscellaneous:

Figs: Dormant Or Delayed Dormant: Fig Scale- Use 3 Gals. In 100 Gal. Water As A Foliar Spray: Mites, Mealybug, Scale- Use 2 Gals. Per 100 Gals. Water.

Olives: Postbloom through August And Postharvest: Scales- Use 1.5 Gals Per 100 Gal. Water. Apply At 400 to 800 Gal. Per Acre.

Banana, Plantains: Use As Needed To Control Yellow Siga. Jka Disease- Use 1-1.5 Gal Per 100 Gal. Water. This Application Is Also Effective In Loosening Sooty Mold Fungus And In Preventing It's Formation By The Control Of Aphids, Mealybugs, Scales and Whitefly.

Avocado (Haas Only) and Mangos: Use 1-1.5 Gals. Per 100 Gal. Water As Needed To Control Aphids, Mealybugs, Scales and Whitefly.

Table 6

### Greenhouse

Crop Or Plant	Pest	Tablespoons Oil	Gals. Oil Per	Specific Comments
	<u>_i</u>	In 1 Gal. Water	100 Gal. Water	<u> </u>
Azaleas	Aphids	2.5-5.0	1-2	Do Not Use On Coconut Palms Or
Begonias	Fungus Gnats	2.5-5.0	1-2	Maidenhair Ferns
Camellias	Bugs	2.5-5.0	1-2	,
Chrysanthemum	Leafminers	2.5-5.0	1-2	Chrysanthemum and Geranium Blooms
Crown of Thorns	Mealybugs	2.5-5.0	1-2	Have Shown Phytotoxic Symptoms At
Diffenbachia*	Scales (soft &	2.5	1	The 2 Gallon Rate.
Easter Lilies	hard)	2.5-5.0	1-2	*Although No Problems With
Ferns	Spider Mites	2.5-5.0	1-2	Phytotoxicity Have Been Seen At
Gardenias	Thrips	2.5-5.0	1-2	Recommended Rates, We Recommend
Geranium	Whitefly	2.5-5.0	1-2	That The Applicator Conduct A
Hibiscus Foliage	(immature)	2.5-5.0	1-2	Phytotoxicity Test On 1 Or 2 Of The
Jade Plant	<b>\</b>	2.5-5.0	1-2	Specific Plants That Are To Be
New Guinea Impatiens	}	2.5-5.0	1-2	Treated "No Phytotoxic Effects Have Been
Palms		2.5-5.0	1-2	Seen With Poinsettia Bracts At The
Philodendron		2.5-5.0	1-2	Recommended Rate.
Poinsettias**	1	2.5	1	Trecommended riage.
Portulaca	1	2.5-5.0	11-2	1
Reiger Begonias	<b>}</b>	2.5-5.0	1-2	}
Zinnias	}	2.5-5.0	1-2	}
Leaf Polish For	T	2.5	1	1
Hardy Plants	<u> </u>	<u>, 1</u>	<u> </u>	<u> </u>

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.

Table 4

Vegetables

Crops	Pest	Gal. Oil Per 100 Gal. Water	Time Of Application
 Asparagus	Aphia	1-2	As Needed
Beans	Mites	<u> </u>	
Beets	Beetle Larvae	ĺ	Ì
Corn	Leatminers		
Cucurbits	Certain Caterpillars		
Peppers	Thrips	<b>\</b>	
Radishes	Leathopper		
Squash	Whitefly		
Tomatoes			

Table 5

Field Crops

Crops	Pest	Gal. Oil Per 100 Gal. Water	Time Of Application
Alfalfa Corn (sweet & field) Sugar Beets	Aphids Mites Leatminers Certain Caterpillars Including Corn Earworm, Rootworm & Armyworm Whitefly Bugs (immature)	2	As Needed

Table 3 (cont)

		Application Rate	- Gallons of Oil	
Crop	Pest	Dilute Spray	Concentrate Spray* (40-100 Gals. Spray Per Acre)	Timing Of Application
Grapes	Mealybug	4-6 Gal. With 200 To 300 Gal. Water/ Acre	Not Recommended	Dormant- A Tank Mix Using An Insecticide Improves Control
	Mealybug	Not Recommended	4	Spray When Crawlers Are Active and Exposed Usually Around Early Summer (Around July 1)
	Leafhopper	Not Recommended	4	Best Results Will Occur When Sprayed During First Brood. Sprays After Grapes Are More Than 1/4" Diameter May Affect Bloom.
	Mites	Not Recommended	4	Apply Before Mites Reach High Populations. Vineyard Should Be Vigorous And Amply Supplied With Moisture. Do Not Allow Excessive Webbing Or Burning.

<sup>\*</sup>Air-carrier or air-blast type sprayers strongly recommended to avoid plant injury and reduce effect on bloom of table grapes.