



**U.S. ENVIRONMENTAL PROTECTION AGENCY**

Office of Pesticide Programs  
Registration Division (7504P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:  
**71096-11**

Date of Issuance:  
**MAY 08 2013**

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

Terms of Issuance:  
**Unconditional**

Name of Pesticide Product:  
**Tetrasul 4s5**

**Name and Address of Registrant (include ZIP Code):**

**OR-CAL, Inc.**  
**29454 Meadowview Rd.**  
**Junction City, Oregon 97448**

**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 registered/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.

EPA received a label amendment request submitted by email on May 2, 2013. EPA grants this request under the authority of section 3(c)(5) of the Federal Insecticide, Fungicide and Rodenticide Act, as amended. With this accepted labeling, all requirements set forth in the Reregistration Eligibility Decision for **Inorganic Polysulfides** have been satisfied. Therefore, EPA reregisters 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.

Submit one (1) copy of final printed labeling before the product is released for shipment. A copy of your label stamped "Accepted" is enclosed for your records. Additionally, the basic and alternate #1 Confidential Statements of Formula (CSFs), dated August 30, 2001 and September 19, 2007, respectively, are acceptable and have been added to the product files. Product released for shipment after twelve (12) months from the date of this Notice or the next printing of your label, whichever occurs first, must bear the new revised label.

If you have any questions or comments regarding this letter, please contact Heather Garvie at (703) 308-0034 or via e-mail at [garvie.heather@epa.gov](mailto:garvie.heather@epa.gov).

Signature of Approving Official:

*Hope A. Johnson*  
Hope A. Johnson  
Acting Product Manager (Team 21)  
Fungicide Branch  
Registration Division

Date:

**MAY 08 2013**

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Label-Rev. 5/1/13

# TETRASUL 4s5

Fungicide-Insecticide-Miticide for Listed Fruits, Nuts, Ornamentals, Roses  
**Not for residential use or application to residential sites.**

**KEEP OUT OF REACH OF CHILDREN  
DANGER PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)  
SEE ADDITIONAL PRECAUTIONARY STATEMENTS INSIDE BOOKLET.

ACTIVE INGREDIENT: Calcium Polysulfide ..... 27%  
OTHER INGREDIENTS: ..... 73%  
TOTAL ..... 100%  
CONTAINS 2.86 LBS. ACTIVE INGREDIENT PER GALLON

ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE LABEL ARE TO BE FOLLOWED. SEE DIRECTIONS FOR USE IN BOOKLET.

**NET CONTENTS 1 GAL. , 2.5 GAL., 5 GAL., 30 GAL., 250 GAL.**

### FIRST AID

IF IN EYES:	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
IF ON SKIN OR 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 poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything to an unconscious person.</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>

**Manufactured By:**  
**OR-CAL, INC.**  
**29454 MEADOWVIEW RD.**  
**JUNCTION CITY, OR. 97448**  
EPA REGISTRATION NO. 71096-11  
EPA ESTABLISHMENT NO. 52251-OR-005

**ACCEPTED**

**MAY 08 2013**

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg No. **71096-11**

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the National Pesticide Telecommunications Center at: 1-800-858-7378 for emergency medical treatment information.

**Note to Physician**

Probable mucosal damage may contraindicate gastric lavage.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**Personal protective equipment (PPE)**

Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow instructions for category A on an EPA chemical-resistance category selection chart.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

**DANGER**

Corrosive. Causes irreversible eye damage. Causes skin burns. Harmful if swallowed or if absorbed through skin. Do not get in eyes, on clothing, or on skin.

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

- Coveralls over long-sleeved shirt and long pants,
- Chemical resistant gloves,
- Goggles or faceshield,
- Chemical-resistant footwear plus socks,
- Chemical-resistant apron when mixing, loading or cleaning equipment, and
- Chemical-resistant headgear for overhead exposure.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing 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**

This pesticide is toxic to fish. Drift may be hazardous to aquatic organisms in water adjacent to treated areas. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

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### **PHYSICAL AND CHEMICAL HAZARDS**

Do not mix TETRASUL 4s5 with acids or phosphate fertilizer products. Deadly and potentially extremely flammable hydrogen sulfide gas may be emitted.

### **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 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 green houses 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 (WPS).

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 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 over long sleeved shirt and long pants
- Chemical resistant gloves made of any waterproof material
- Chemical-resistant footwear plus socks
- Goggles or faceshield
- Chemical-resistant headgear for overhead exposure

**STORAGE AND DISPOSAL**

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

**Pesticide Storage:** Store product in a secure locked place, inaccessible to children, pets, and livestock. Store in a cool, dry place. Keep container closed when not in use. Do not store near fertilizers.

**Pesticide Disposal:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Container Handling:** 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. Triple rinse container (or equivalent) promptly after emptying. Offer for recycling, if available or offer for reconditioning, if appropriate or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

-For 50 lbs. container or less, triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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.

-For over 5 gallon or 50 lbs. container; 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 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.

**ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE LABEL ARE TO BE FOLLOWED**

Tetrasul 4s5 is a fungicide, insecticide and miticide that contains Lime Sulfur and a wetting agent. Spray to cover foliage until wet. If spray contacts concrete and white, painted surfaces, discoloration of this surface may occur.

Faulty spray equipment, highly concentrated materials, or extremes of weather during or following spraying may lead to fruit or foliage injury. The risk of spray injury is greater when drought stress exists. The user is advised not to use Lime Sulfur on any crop unless local use has proved that Lime Sulfur does not damage crops in that locality.

**Not for residential use or application to residential sites.**

Do not use Lime Sulfur on apricots. Do not use Oil with Lime Sulfur in summer applications except where specified on the label. Do not apply when temperature exceeds 85 F. Do not apply Oil following Lime Sulfur, nor Lime Sulfur following Oil, in foliage period.

Where a rate range is given, use the highest rates when disease is severe or where disease was severe in the previous season.

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

**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, chemigation) can influence pesticide drift. The applicator and grower must evaluate all factors and make appropriate adjustments when applying this product.

**FOR GROUND BOOM APPLICATIONS:**

**WIND SPEED:** Do not apply at wind speeds greater than 10 mph at the application site.

**DROPLET SIZE:** Apply as a medium or coarser spray according to the American Society of Agricultural Engineers (ASAE) 572 definition for standard nozzles (Medium and Coarse) and the minimum volume mean diameter (VMD) for spinning atomizer nozzles.

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

**For Airblast Applications:**

Sprays must be directed into the crop canopy, rather than above the canopy. Outward pointing nozzles should be turned off at row ends and when spraying outer rows.

**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.

**• ALMONDS**

**DORMANT OR DELAYED DORMANT for Scab (Cladosporium Carpophilum);** Apply 2 to 3 gallons of product per 100 gallons of water.

**DORMANT for Powdery Mildew, Shothole;** Apply 2 to 3 gallons of product per 100 gallons of water every 2 weeks between November 15 and December 15.

**PRE-BLOOM, EARLY BLOOM AND FULL BLOOM for Brown Rot Blossom Blight;** Apply ½ to 1 ¼ gallons of product per 100 gallons of water.

**NOTE TO USER:** Do not apply more than 46 gallons of Tetrasul 4s5 Solution product (136.5 lbs. of Calcium Polysulfide) per acre per year.

• **APPLES**

**DORMANT for Blister Mite, Rust Mite, Brown Mite, European Red Mite and San Jose Scale;** Apply 2 to 3 gallons of product, OR 1 ½ gallons of product plus 1 ½ gallons supreme or superior type oil spray per 100 gallons of water per acre.

**NOTE:** Apple Scab and Powdery Mildew are not controlled at this stage.

**DELAYED DORMANT for Blister Mite, Rust Mite, Apple Scab, Brown Mite, Powdery Mildew;** Apply 2 to 3 gallons of product per 100 gallons of water. **For Leaf Spot;** Apply 1 ½ to 3 gallons of product per 100 gallons of water. **For Scab only;** Apply ½ gallon of product per 100 gallons of water in delayed dormant, pre-pink and pink stage.

**PRE-PINK for Powdery Mildew;** Apply ¾ to 1 ¼ gallon of product per 100 gallons of water.

**PINK for Powdery Mildew;** Apply ¾ to 1 ¼ gallon of product per 100 gallons of water. A Petal fall application may be needed.

**PRE-BLOOM for Blotch;** Apply 1 to 1 ½ gallons of product per 100 gallons of water.

**PETAL FALL for Blotch;** Apply 1 to 1 ½ gallons of product per 100 gallons of water. Repeat in 10 days.

**GROWING SEASON FOLIAR SPRAYS for Leaf Spot;** Apply ½ gallon of product per 100 gallons of water.

**POST-HARVEST (Late fall after temperatures cool in Mid-October to November, before the first frost) for Rust Mite, Blister Mite, San Jose Scale, Aphid and Mite eggs;** Apply 1 ½ gallons of product plus 1 ½ gallons of supreme or superior type oil per 100 gallons of water.

**NOTE TO USER:** Post-Harvest applications of Lime Sulfur may cause early defoliation.

Early Post-Harvest sprays (early to mid September) can retard tree growth and are not recommended.

Use on Delicious apples may cause injury.

**USE RESTRICTIONS:**

**DO NOT USE ON GINGER GOLD APPLES.**

Do not apply more than 68 gallons of Tetrasul 4s5 product (201.8 lbs. of Calcium Polysulfide) per acre per year.

• **BLUEBERRIES**

**Phomopsis Cane and Twig Blight;** Apply 2 to 3 gallons of product per 100 to 150 gallons of water per acre. Apply during delayed dormant stage after leaf buds begin to break. To aid control of **Mummy Berry** (caused by the fungus *Sclerotinia Urnula*), apply a post-harvest (September or October) or early dormant spray of 2 gallons of product per 100 gallons of water. Use 200 to 300 gallons of spray per acre.

**NOTE TO USER:** Do not use within 14 days of an oil spray or when temperatures are above 85° F. Burning of foliage may occur during period of warm temperatures.

**USE RESTRICTIONS:**

Do not apply more than 21 gallons of Tetrasul 4s5 product (62.3 lbs. of Calcium Polysulfide) per acre per year.

• **CANEBERRIES: (Blackberries, Boysenberries, Raspberries)**

**FALL application for Red Berry Mite, Blackberry Leaf Mite;** Apply 2 to 3 gallons of product per 100 gallons of water after old canes have been removed from the field.

**DORMANT OR DELAYED DORMANT (Green Bud) for Anthracnose, Cane Blight, Powdery Mildew, Overwintering Spores, Rust;** Apply 2 to 3 gallons of product per 100 gallons of water. **For Spur Blight;** Apply one spray at 3 gallons or two sprays at 2 gallons before buds break and show silver. **For Overwintering Spores only;** Apply 2 gallons of product per 100 gallons of water.

**DELAYED DORMANT or when leaf buds first start to open for Red Berry (Blackberry mite), Rose Scale, Oyster Scale, San Jose Scale and Yellow Rust;** Apply 2 to 3 gallons of product per 100 gallons of water.

**EARLY SPRING, when new growth is 1 ½ inches long, for Rose Scale, Oyster Scale, San Jose Scale and Yellow Rust;** Apply 1 to 1 ½ gallons of product per 100 gallons of water. **When fruiting canes are 8 to 12 inches long and before blossoms have opened, for Anthracnose, Cane Blight, Powdery Mildew and Rust;** Apply ½ to 1 ¼ gallons of product per 100 gallons of water. Do not use on Raspberries at this time.

**USE RESTRICTIONS:** Do not apply more than 31 gallons of Tetrasul 4s5 Solution product (92 lbs. of Calcium Polysulfide) per acre per year.

• **CHERRIES (SWEET)**

**DELAYED DORMANT for Powdery Mildew;** Apply 2 to 3 gallons of product per 100 gallons of water. **For the control of Coryneum Blight (Shot Hole), Scale Insects, Peach Twig Borer, Leaf Curl, Silver Mites;** Apply 2 to 3 gallons of product per 100 gallons of water OR at a rate of 1 ½ gallons of product with 1 ½ gallons of superior type oil per 100 gallons of water for additional control of **Brown Mites and Red Mites.**

**POST-HARVEST for Brown Mites, Two Spotted Mites, Powdery Mildew;** Apply ½ to 1 ½ gallons of product per 100 gallons of water.

**USE RESTRICTIONS:** Do not apply more than 42 gallons of Tetrasul 4s5 Solution product (124.7 lbs. of Calcium Polysulfide) per acre per year.

• **CHERRIES (TART)**

**DELAYED DORMANT for the control of Coryneum Blight, Scale Insects, Peach Twig Borer, Leaf Curl, Silver Mites;** Apply 2 to 3 gallons of product per 100 gallons of water OR at a rate of 1 ½ gallons of product with 1 ½ gallons superior type oil per 100 gallons of water for additional control of **Brown Mites and Red Mites.**

**PRE-BLOOM, EARLY BLOOM AND FULL BLOOM for Brown Rot Blossom Blight, Leaf Spot, Scab;** Apply up to 3 sprays at ¾ to 1 ¼ gallons of product per 100 gallons of water.

**LATE SEASON for Brown Rot (Fruit). Leaf Spot, Powdery Mildew;** Apply ½ gallon of product per 100 gallons of water. Apply 3 to 5 sprays at weekly intervals just before harvest.

**POST-HARVEST for Brown Mites, Two Spotted Mites;** Apply 1 gallon of product per 100 gallons of water.



**USE RESTRICTIONS:** Do not apply more than 20 gallons of Tetrasul 4s5 Solution product (59.4 lbs. of Calcium Polysulfide) per acre per year.

• **CITRUS**

**Red Spider Mites;** Apply 1 to 1 ½ gallons of product per 100 gallons of water when the mites appear. **Thrips;** Apply 2 gallons of product per 100 gallons of water after petals have mostly fallen.

**Rust Mites; JANUARY:** Apply 1 ½ gallons of product per 100 gallons of water.

**APRIL or MAY, AUGUST 15 to SEPTEMBER 15, and OCTOBER 15 to DECEMBER 15;** Apply 1 gallon of product per 100 gallons of water. Spray tangerines during late winter and early spring (February 15 to April 15).

**NOTE TO USER:** Early and Mid-Season citrus may be injured by Tetrasul 4s5 sprays during summer and early fall months.

**USE RESTRICTIONS:** Do not apply more than 30 gallons of Tetrasul 4s5 Solution product (89 lbs. of Calcium Polysulfide) per acre per year.

• **CURRENTS, GOOSEBERRIES**

**BUD BREAK for Anthracnose;** Apply 1 to 1 ½ gallons of product per 100 gallons of water and repeat 10 to 15 days later. Apply ½ to ¾ gallon of product per 100 gallons of water at 10 day intervals after second spray if needed.

**PRE-BLOOM and POST-BLOOM for Powdery Mildew;** Apply ¾ to 1 ¼ gallons of product per 100 gallons of water.

**USE RESTRICTIONS:** Do not apply more than 20 gallons of Tetrasul 4s5 Solution product (57 lbs. of Calcium Polysulfide) per acre per year.

• **FRUIT TREES (BEARING)**

**DORMANT for Overwintering Fungus Spores;** Apply 1 ½ to 2 gallons of product per 100 gallons of water.

**USE RESTRICTIONS:** Do not apply more than 10 gallons of Tetrasul 4s5 Solution product (29.7 lbs. of Calcium Polysulfide) per acre per year.

• **FRUIT TREES (NON-BEARING)**

**CLUSTER BUD and PRE-BLOOM for Blotch, Powdery Mildew, Scab;** Apply ½ to ¾ gallon of product per 100 gallons of water.

**USE RESTRICTIONS:** Do not apply more than 10 gallons of Tetrasul 4s5 Solution product (29.7 lbs. of Calcium Polysulfide) per acre per year.

• **GRAPES**

**Anthracnose:** Apply ½ gallon of product per 100 gallons of water. Apply when new shoots are 4 to 6 inches long.

**(Dormant only): Mealybugs;** Apply 2 gallons of product per 100 gallons of water. Apply 200 gallons dilute spray per acre.

**Powdery Mildew (both A and B isolate)** on field, nursery and container grown Grapes – For juice (concentrate, fresh), ornamental, raisin, table, and wine.

**Non Dormant Grapes – (bud break through harvest)** Dilute ½ gallon of Tetrasul 4s5 Solution product per 100 gallons of water. Apply a minimum of 50 gallons of dilute spray per acre. Repeat once or twice at two week intervals or when new shoots are

a minimum of 4 – 6 inches long. Applications for adequate control or suppression of Powdery Mildew are needed on a continued schedule depending on severity of the infection and migration of the new growth. In southern regions of the United States, or lower elevations, or in warm climates, grape laterals (flag shoots) and terminals grow rapidly often 4 to 6 inches per week and continued coverage is needed for adequate suppression or control of Powdery Mildew. User of the product needs to make careful observations for the timing of application for proper control of Powdery Mildew.

Dormant treatments before late Fall rains/leaf drop and Winter Treatments – Dilute 2 to 3 gallons of Tetrasul 4s5 Solution product per 100 gallons of water. Apply 50-200 gallons dilute spray per acre for Powdery Mildew over wintering spores. Powdery Mildew can attack all above ground parts of the grape plant. Spray the entire portion of the above ground parts of the plant. Apply at least 4 hours prior to rainfall or irrigation. Dilute sprays of 1 to 1 ½ gallons per 100 gallons of water may be applied when buds are swelling, when leaves are half grown and just before blossoming.

SYMPTOMS AND LIFE CYCLE of Powdery Mildew of Grape – *Erysiphe necator* (both A and B isolate).

The fungus may overwinter as a group of thin threads, called hyphae, inside dormant buds of the grapevine and/or as small black bodies, called chasmothecia, on the exfoliation bark of the vine. Buds on new shoots can be infected 4 to 6 weeks after shoots start growing but not after bud scales become suberized. These new infected buds remain quiescent until the next growing season. The fungus infects developing buds during the growing season.

Under optimal conditions of mild temperatures and high humidity, a single spore can germinate, infect the plant, produce a new colony and a new crop of spores in 3 days. Temperatures over 85°F inhibit germination of conidia (spores). Susceptibility of the fruit drops rapidly after 8% - 15% Brix. Leaves and canes can be infected up to and past harvest. Appearing in the early stages as whitish or grayish patches on the leaves and ultimately covering both surfaces when severe. Colonies are more easily observed in full sunlight. Later in the season the mildew turns darker and becomes peppered with minute black dots (chasmothecis). On the fruit, the fungus at first may appear grayish and whitish, but later it has a brownish russeted appearance. Infected fruit cracks and drops from the cluster. Even the blossoms can sometimes be infected causing them to dry up or fail to set fruit. Consult your local extension service for further details on Symptoms and Life Cycle.

**USE RESTRICTIONS:** Do not apply more than 42 gallons of Tetrasul 4s5 Solution product (124.7 lbs. of Calcium Polysulfide) per acre per year.

• **HAZELNUTS**

**(Not for Use in California) Big Bud Mite;** Apply 3 gallons of product per acre in a minimum of 100 gallons of water per acre for complete coverage of trees. Apply when buds begin to open in the spring.

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**USE RESTRICTIONS:** Do not apply more than 12 gallons of Tetrasul 4s5 Solution product (35.6 lbs. of Calcium Polysulfide) per acre per year.

• **NECTARINES**

**EARLY WINTER AND LATE DORMANT for Leaf Curl;** Apply 2 to 3 gallons of product per 100 gallons of water.

**GROWING SEASON for Powdery Mildew;** Apply ½ gallon of product per 100 gallons of water as needed when disease appears. **For Brown Rot, Leaf Spot, Shothole;** Use ½ gallon of product per 100 gallons of water. Apply at 10 to 14 day intervals until about 1 month of harvest.

**USE RESTRICTIONS:** Do not apply more than 36 gallons of Tetrasul 4s5 Solution product (106.9 lbs. of Calcium Polysulfide) per acre per year.

• **ORANGES (NAVEL AND VALENCIA)**

**Flat Mite, Thrips, Light Infestations of Citrocola Scale;** Apply 1 to 1 ½ gallons of product per 100 gallons of water in winter between January 1 and March 15, but before new shoots exceed ½ inch in length. Do not apply where heavy copper residues are present.

**USE RESTRICTIONS:** Do not apply more than 24 gallons of Tetrasul 4s5 Solution product (71.2 lbs. of Calcium Polysulfide) per acre per year.

• **PEACHES**

**DORMANT for Peach Leaf Curl, Scab, Shothole;** Apply 2 to 3 gallons of product per 100 gallons of water. **For leaf Curl only;** apply 2 to 3 gallons of product in full coverage spray. Apply after all leaves have fallen and before buds begin to swell. If Leaf Curl has been severe, two applications may be needed, the first in Early Dormant, the second in Delayed Dormant.

**DORMANT OR DELAYED DORMANT for Scale Insects, Silver Mites, Peach Twig Borers, Coryneum Blight, Aphids;** Apply 2 to 3 gallons of product per 100 gallons of water OR 1 ½ gallons of product per 100 gallons of water with 1 ½ gallons superior oil for additional control of Brown Mites and Red Mites.

**DELAYED DORMANT for Powdery Mildew;** Apply 2 to 3 gallons of product per 100 gallons of water at Green Tip, apply second spray at ¾ to 1 ¼ gallons.

**DOT NOT** apply dormant spray to peaches immediately after or during periods of 5 days or more of unseasonably high temperatures if a sufficient number of dormant cold hours have occurred.

**PRE-BLOOM, EARLY BLOOM AND FULL BLOOM for Brown Rot Blossom Blight;** Apply ¾ to 1 ¼ gallons of product per 100 gallons of water, one spray at each period if conditions require it.

**SUMMER FOLIAGE SPRAYS for Powdery Mildew;** Apply ½ gallon of product per 100 gallons of water. **For Brown Rot, Powdery Mildew and Leaf Spot;** Apply ½ gallon 3 to 5 times at weekly intervals until harvest. Avoid spraying during hot period of the day or during hot humid conditions. Spray only to the drip point, not runoff, as excessive spray may cause injury.

**USE RESTRICTIONS:** Do not apply more than 27 gallons of Tetrasul 4s5 Solution product (80.1 lbs. of Calcium Polysulfide) per acre per year.

• **PEARS**

**DORMANT for Pear Leaf Blister Mite;** Apply 2 to 3 gallons of product per 100 gallons of water. May be combined with oils labeled for dormant use on pears.

**DORMANT OR DELAYED DORMANT for control of the following;** Apply 2 to 3 gallons of product per 100 gallons of water. Diseases; **Pear Scab, and Powdery Mildew.** Insects; to aid in the control of hatching eggs and young nymphs of **Green Apple Aphid, Rosy Aphid and Pear Psylla and to control Scab, Powdery Mildew, San Jose Scale, Rust Mite, Pear Leaf Blister Mite, European Red Mite and Brown Almond Mite.**

**DELAYED DORMANT for the control of the following insects;** Apply 1 ½ gallons of product per 100 gallons of water plus 1 ½ gallons supreme or superior type oil. **Pear Leaf Blister Mite, Rust Mite, European Red Mite, San Jose Scale, Pear Psylla.** For control of **Pear Scab;** Apply 2 to 3 gallons of product per 100 gallons of water.

**DO NOT USE ON: d'Anjou, Comice or Seckle varieties after Delayed Dormant.**

**GREEN TIP TO FINGER BUD for Scab, Rust Mite and Powdery Mildew;** Apply 1 to 1 ½ gallons of product per 100 gallons of water.

**CRACKED BUD for Scab and Powdery Mildew;** Apply 1 to 1 ½ gallons of product per 100 gallons of water.

**CLUSTER BUD for Scab and Powdery Mildew;** Apply ¾ to 1 ¼ gallons of product per 100 gallons of water.

**FINGER BUD for Scab and Powdery Mildew;** Apply ¾ to 1 ¼ gallons of product per 100 gallons of water.

**PETAL FALL for Scab and Powdery Mildew;** Apply ¾ to 1 ¼ gallons of product per 100 gallons of water.

**GROWING SEASON FOLIAR SPRAYS for persistent Powdery Mildew;** Apply ½ gallon of product per 100 gallons of water throughout the growing season as needed.

**POST-HARVEST (Early to Mid-September) for Rust Mite and Pear Leaf Blister Mite;** Apply 1 ½ gallons of product per 100 gallons of water plus ¾ gallons supreme or superior type oil, OR 2 to 3 gallons of product with no oil per 100 gallons of water.

**POST-HARVEST (late fall after temperatures cool (mid-October to November) before the first frost) for Scale Insects, Pear Psylla, Aphid and Mite Eggs, Pear Leaf Blister Mite;** Apply 1 ½ gallons of product per 100 gallons of water plus 1 ½ to 2 gallons of supreme or superior type oil. **For Bud Mite (Pacific Coast States);** Apply when mites first penetrate under bud scales.

**NOTE TO USER: DO NOT allow Post Harvest sprays to drift to adjacent apple orchards as defoliation may occur.**

**USE RESTRICTIONS:** Oils must not be used with Lime Sulfur except as indicated above. **DO NOT** apply oil after Tetrasul 4s5 sprays as injury may occur.

Allow a minimum of 10 days between a Delayed Dormant oil application and a later Tetrasul 4s5 application. **DO NOT** apply Tetrasul 4s5 spray if oil has been applied after Delayed Dormant. Allow 21 days between oil and Tetrasul 4s5 sprays in the growing season, as injury may occur. Use only on Lime Sulfur tolerant varieties. Drought, cold and high temperatures, and other conditions may weaken trees. **DO NOT** apply Tetrasul 4s5 or oils to trees in weakened condition. Do not apply more than 68 gallons of Tetrasul 4s5 product (201.8 lbs. of Calcium Polysulfide) per acre per year.

• **PECANS**

**GROWING SEASON for Yellow Pecan Aphids and Mites (Tetranychidae and Eriophyidae);** Apply 1 gallon of product per 100 gallons of water. For mature trees apply as full coverage spray using 200 to 400 gallons of spray per acre (2 to 4 gallons Tetrasul 4s5 per acre). Thorough coverage is essential for control. **For Yellow Aphids;** Spray as needed to prevent excessive honeydew buildup. **For Mites;** Spray when infestation is first noticed.

**USE RESTRICTIONS:** Do not apply more than 24 gallons of Tetrasul 4s5 Solution product (71.2 lbs. of Calcium Polysulfide) per acre per year.

• **PISTACHIOS**

**DORMANT OR DELAYED DORMANT for suppression of Botryosphaeria Panicle and Shoot Blight caused by Botryosphaeria dothidea, and for Alternaria Late Blight;** Apply 2 to 3 gallons of product per 100 gallons of water.

**USE RESTRICTIONS:** Do not apply more than 20 gallons of Tetrasul 4s5 Solution product (59.4 lbs. of Calcium Polysulfide) per acre per year.

• **PLUMS**

**DORMANT for Leaf Curl;** Apply 2 to 3 gallons of product per 100 gallons of water.

**GREEN TIP for Black Knot;** Apply 2 to 3 gallons of product per 100 gallons of water.

**DORMANT OR DELAYED DORMANT for Scale Insect, Silver Mites, Peach Twig Borers, Coryneum Blight, Peach Leaf Curl, Aphids;** Apply 2 to 3 gallons of product per 100 gallons of water OR 1 ½ gallons of product plus 1 ½ gallons superior type oil per 100 gallons of water for additional control of **Brown Mites and Red Mites.**

**LATE SEASON for Blotch, Powdery Mildew;** Use ½ gallon of product per 100 gallons of water, apply weekly beginning 3 to 5 weeks before harvest. **For Brown Rot (Fruit Rot);** Apply ½ gallon of product per 100 gallons of water at 20, 10 and 2 days before harvest.

**USE RESTRICTIONS:** Do not apply more than 44 gallons of Tetrasul 4s5 Solution product (130.6 lbs. of Calcium Polysulfide) per acre per year.

• **PRUNES**

**GREEN TIP STAGE for Black Knot;** Apply 2 to 3 gallons of product per 100 gallons of water.

**DORMANT OR DELAYED DORMANT for Scale Insects, Silver Mites, Peach Twig Borers, Coryneum Blight, Peach Leaf Curl, Aphids;** Apply 2 to 3 gallons of product per 100 gallons of water OR 1 ½ gallons of product with 1 ½ gallons of superior type oil for additional control of **Brown Mites and Red Mites.**

**LATE SEASON for Brown Rot (Fruit Rot), Leaf Spot, Powdery Mildew;** Apply ½ gallon of product per 100 gallons of water in weekly applications beginning 3 to 5 weeks before harvest.

**USE RESTRICTIONS:** Do not apply more than 36 gallons of Tetrasul 4s5 Solution product (106.9 lbs. of Calcium Polysulfide) per acre per year.

• **QUINCE**

**For Scab;** Apply 1 gallon of product per 100 gallons of water at 10 day intervals during primary infection period.

**USE RESTRICTIONS:** Do not apply more than 30 gallons of Tetrasul 4s5 Solution product (89 lbs. of Calcium Polysulfide) per acre per year.

• **RED CLOVER, ALFALFA**

**EARLY BUD STAGE or at first sign of disease for Powdery Mildew;** Apply ½ to 1 gallon of product per 50 to 100 gallons of water per acre. Apply at early bud stage or at first sign of disease.

**USE RESTRICTIONS:** Do not apply more than 10 gallons of Tetrasul 4s5 Solution product (29.7 lbs. of Calcium Polysulfide) per acre per year.

• **ROSES**

**EARLY SPRING SPRAYING (AS GROWTH STARTS) Rose and San Jose Scale, Case Bearer, Powdery Mildew;** Apply 1 to 1 ½ gallons of product per 100 gallons of water. Apply in spring before buds swell and again in fall after leaves drop.

**SUMMER FOLIAGE SPRAYING Black Spot, Powdery Mildew, Rust, Red Spider Mites;** Apply ½ gallon of product per 100 gallons of water. Apply at 10 to 15 day intervals in growing season.

**USE RESTRICTIONS:** Do not apply more than 12 gallons of Tetrasul 4s5 Solution product (35.6 lbs. of Calcium Polysulfide) per acre per year.

• **SHADE TREES, ORNAMENTAL SHRUBBERY, DECIDUOUS HEDGE PLANTS AND BERRIES: DORMANT DISEASE CONTROL**

**FALL for Stem Canker;** Apply 2 to 3 gallons of product per 100 gallons of water, repeat at Bud Swell.

**DORMANT for Anthracnose, Black Spot, Powdery Mildew, Rust:** Apply 2 to 3 gallons of product per 100 gallons of water.

**SPRING DORMANT on Boxwood for Canker;** Apply 2 gallons of product per 100 gallons of water after leaves are cleaned up. **AS LEAVES BEGIN TO EMERGE for Anthracnose, Black Spot, Brown Canker;** Apply 2 gallons of product per 100 gallons of water. (See Boxwood under Foliar Sprays.)

**DORMANT: HARD OR ARMORED SCALE CONTROL AND WINTER CLEANUP of Overwintering Spores of diseases listed for each crop in other sections of this label: Scales such as Scurfy Scale, San Jose Scale, Euonymus Scale, Pine Needle Scale, Juniper Scale on deciduous Fruit Trees, Ornamental Shrubberies, Berries and most Ornamental Trees such as Lilac, Ash, Poplar, Dogwood, Elm, Birch Willow;** Apply 2 to 3 gallons when fully dormant.

**FOLIAR SPRAYS: Ornamentals such as Begonias (Tuberous), Crape Myrtle, Dahlias, Delphiniums, Euonymus, Lilacs, Marigolds, Sweet Peas, Zinnias for Powdery Mildew;** Apply ½ gallon of product per 100 gallons of water when foliage appears and repeat at 7 to 10 day intervals as needed. **Boxwood Canker;** Apply

½ gallon of product per 100 gallons of water at spring mid-growth, completed growth and fall growth. Follow with a dormant application.

**PLANT TOLERANCE:** For specific plants not mentioned above a preliminary trial spray to determine plant tolerance is recommended.

**USE RESTRICTIONS:** Do not apply more than 40 gallons of Tetrasul 4s5 Solution product (118.7 lbs. of Calcium Polysulfide) per acre per year.

**COMBINATION WINTER SPRAY**

- **FRUIT TREES, ROSES AND DECIDUOUS HEDGE PLANTS, SHADE TREES AND SHRUBS (DORMANT AND DECIDUOUS ONLY)**

**San Jose Scale, Oyster Shell Scale, Brown Apricot Scale, Black Scale, Overwintering Insect Eggs, Many Overwintering Fungus Spores, Or Plant Disease;** Apply 1 ½ gallons of product plus 1 ½ gallons dormant spray oil per 100 gallons of water. Keep agitated during spraying.

**CONDITIONS OF SALE – LIMITED WARRANTY AND LIMITATIONS OF LIABILITY AND REMEDIES**

The directions on this label are believed to be reliable and must be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions, the failure to follow the label directions all of which are beyond the control of OR-CAL, Inc. or seller. In addition, failure to follow the label directions may cause injury to crops, animals, man or the environment. OR-CAL, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of OR-CAL, Inc. OR-CAL, Inc. makes no other warranties or representations of any kind, express or implied concerning the product, including no implied warranty of merchantability or fitness for any particular purpose. To the extent consistent with applicable law, the exclusive remedy against OR-CAL, Inc. for any cause of action relating to the handling or use of this product is a claim of damage and damages or any other recovery of any kind against OR-CAL, Inc. shall not exceed the price of the product, which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, OR-CAL, Inc. shall not be liable for losses or damages resulting from special, indirect, incidental, or consequential damages or expenses, or any nature, including, but not limited to, loss of profits, or income, whether or not based on OR-CAL, Inc. negligence, breach of warranty, strict liability in tort or any other cause of action. OR-CAL, Inc. and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.