

61842-16

4/1/2009

1/24

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Mr. Michael Kellogg
Tessenderlo Kerley, Inc
c/o Pyxis Regulatory Consulting, Inc.
4110 136th Street NW
Gig Harbor, WA 98332

APR 01 2009

Subject: Tessenderlo Kerley, Inc; Surround CF Crop Protectant
EPA Registration No. 61842-16
Amendment to Update Company Information, Storage and Disposal, and Warranty
D# 399590, Application Dated 9/4/8

Dear Ms. Bolan:

The amendment referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(A), is acceptable provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.
2. Submit two (2) copies of your final printed labeling before you release the product for shipment. Final printed labeling means the label or labeling of the product when distributed or sold. Clearly legible reproductions or photo reductions will be accepted for unusual labels, such as those silk-screened directly onto glass or metal containers or large bags or drum labels.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(b). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

If you have any questions contact Chris Pfeifer at 703-308-0031 or by email at: pfeifer.chris@epa.gov. A stamped copy of the label is enclosed for your records.

Sincerely,

Linda A. Hollis, Chief
Biochemical Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)

Enclosure

CONCURRENCES

SYMBOL	7511P	7511P					
SURNAME	PFEIFER	B. Pfeifer					
DATE	3/26/9	3/31/09					

Master Label

Surround® CF CROP PROTECTANT

Surround CF Crop Protectant Forms a Barrier Film, Which Acts as a Broad Spectrum Agricultural Crop Protectant for Controlling Damage from Labeled Insect, Mite, and Disease Pests, Growth Enhancer, and Protectant Against Sunburn and Heat Stress

ACTIVE INGREDIENT:

Kaolin:..... 95.0%

OTHER INGREDIENTS:..... 5.0%

Total: 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

Manufactured by:
Tessenderlo Kerley, Inc.
2255 North 44th Street
Suite 300
Phoenix, AZ 85008-3279
1-800-525-2803

Net Weight:

EPA Reg. No. 61842-16
EPA Est. No. 51036-GA-001

ACCEPTED

APR 01 2009

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

61842-16

3/24

General Agricultural Label

Surround® CF CROP PROTECTANT

Surround CF Crop Protectant Forms a Barrier Film, Which Acts as a Broad Spectrum Agricultural Crop Protectant for Controlling Damage from Labeled Insect, Mite, and Disease Pests, Growth Enhancer, and Protectant Against Sunburn and Heat Stress

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CAUTION

Manufactured by:
Tessenderlo Kerley, Inc.
2255 North 44th Street
Suite 300
Phoenix, AZ 85008-3279
1-800-525-2803

Net Weight 50 lbs (22.6 kg)

EPA Reg. No. 61842-16
EPA Est. No. 751036-GA-001

The use of Surround® CF in agricultural crop protection applications is covered by US Patents 6,027,740; 6,069,112; 6,110,869 and 6,156,327.

FIRST AID	
If in Eyes:	<ul style="list-style-type: none"> • 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 eye. • Call a poison control center or doctor for treatment advice.
If Inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor or gong for treatment. For emergency information on Surround CF Crop Protectant, call the National Pesticides Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific time (PT), seven days a week. During other times, call the poison control center 1-800-222-1222.</p>	

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Harmful if inhaled. May cause irritation to the respiratory system. Avoid breathing dust or mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Applicators, pickers, and other handlers must wear:

- Long sleeved shirt, long pants
- Socks and shoes
- Protective Eyewear
- A dust/mist-filtering respirator with (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P, or HE filter.

ENVIRONMENTAL HAZARDS

For terrestrial uses. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Surround CF must be used in accordance with the directions on this label or in separately published Tessenderlo Kerley, Inc. supplemental labeling.

AGRICULTURAL USE REQUIREMENTS

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. 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, in forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

The restricted-entry interval (REI) is 4 hours from the time of application. Do not allow worker entry into treated areas during the restricted-entry interval (REI).

Personal-protection equipment required for early entry workers are long-sleeved shirts, long pants, and shoes plus socks.

I. APPLICATION INSTRUCTIONS

Surround CF protectant forms a mineral-based particle film intended for protection of agricultural crops. When Surround CF is applied to plants, a dry white film results. The Surround CF barrier reduces the damage to plants and crops caused by labeled insects, mites, disease, and environmental stresses such as solar effects. This product is intended as a primary component in pest management systems that utilize supplementary compatible pesticides.

Lack of adhesion or film formation on foliage or fruit indicates spray incompatibility with the plant surface or previously applied materials therefore, do not tank mix with these materials.

Ensure that plant leaf and fruit surfaces are dry before applying or poor adhesion or film formation will occur.

Do not spray where a visible white film is undesirable or cannot be washed off.

a. Mix Instructions:

For Agitating Sprayer Tanks

For Concentrate Application - Use 50 lbs. of Surround CF per 100 gallons of water.

For Dilute Application - Use 50 lbs. of Surround CF per 200 gallons of water.

The following mixing sequence must be followed:

1. Slowly add **Surround CF** powder into the water in a recirculating sprayer tank. Add directly into the mix basket. If there is no mix basket, add powder very slowly to the recirculating water. Mix thoroughly.
2. Add tank mix pesticides, if any.
3. Continue agitation until all of the material is sprayed from the tank.
4. At the end of the application, spray until empty and flush system and nozzles with fresh water. Properly dispose of rinse water.

For Non-agitating Sprayer Tanks, Such as Backpack Sprayers

The following mixing sequence must be followed:

1. Use **Surround CF** powder at a rate of ½ lb. of **Surround CF** powder per one gallon of water.
2. While stirring or swirling, slowly add **Surround CF** powder into ¼ to ½ of the water that will be used in the batch.
3. Mix thoroughly by shaking the closed container vigorously for 30 seconds.
4. Add tank mix pesticides, if any.
5. Add the remainder of the batch water and shake for an additional 30 seconds.
6. Shake the sprayer occasionally during application.
7. At the end of the application, spray until empty and flush system and nozzles with fresh water. Properly dispose of rinse water.

b. Compatibility:

Surround CF is not affected by most other insecticides, miticides, and fungicides. However, to ensure compatibility, test tank mixes before use. When mixing with other products, make up a small batch and observe slurry and film characteristics. Curdling, precipitation, lack of film formation, or changes in viscosity are signs of incompatibility. Do not tank mix with sulfur, copper, or bourdeaux mixture fungicides. **Always add tank mix pesticides after the Surround CF powder and spreader/sticker have been added.** Use of anti-foaming agents can interfere with proper coverage.

Tank mixes with pyrethrins, potassium salts of fatty acids and rotenone are generally compatible, but curdling, precipitation, uneven film formation, or changes in viscosity are signs of incompatibility. Test mix compatibility before use. If these conditions occur, do not tank mix **Surround CF** with these product(s).

Do not use additional spreader/stickers. Products that specify other spreader/stickers cannot be tank mixed with Surround CF.

c. Conditions of Application (see, also, specific crop use instructions):

Coverage: Use sufficient spray volume to obtain thorough coverage. For optimal performance, applications must coat all portions of plant that are to be protected, including both sides of the leaves. Applications can be made with any commercial air blast or high-pressure sprayer that provides enough air turbulence to coat both sides of the leaves, bark, and fruit. Tractor speed must not exceed 3 mph.

Plant Color Change: All plant surfaces must turn a hazy white color after drying. Additional treatments will turn the plant surfaces a deeper white. This is normal, and is indicative of appropriate film formation. Generally, two or more coatings are required for complete coverage and for establishment of the foundation of the protective barrier.

Foliage Dryness: Apply only to dry foliage. Do not apply to wet foliage or poor coverage and adhesion will result.

Droplet Size: Nozzles that produce a fine spray work best when Surround CF is used under normal temperature and humidity conditions. Under very hot and dry conditions, nozzles that produce a coarser spray and larger volumes work best. In all cases, use a nozzle that does not result in the product drying before it contacts the foliage because this will result in poor film formation.

Spray Methods: Air blast or high-pressure sprayers are required. Observe specific crop label instructions for directions regarding spray volume. Calibrate spray equipment per equipment manufacturer to deliver the required volume. The flow rate of this product is similar to water. Use strainers in the spray system and behind each nozzle per normal practice.

Reapplication: Reapply when the dry foliage has lost its white appearance, usually every 7-17 days. Intervals can be widened later in the season when new growth diminishes. Heavy rainfall, new growth, and wind erosion will affect film quality. Reapply to re-establish coverage after heavy rain as soon as the foliage is dry.

Overhead Irrigation Considerations: Overhead irrigation will wash off the film and reduce product efficacy. Do not use overhead irrigation unless it is just prior to the next application. Do not apply Surround CF through sprinkler irrigation systems or by air.

d. Labeled Insect and Mite Control:

Surround CF is a protectant/repellent that forms a film barrier to labeled insects and mites. For optimum performance, begin application before a particular insect or mite outbreak occurs; thorough coverage must be in place before the pest outbreak. Thorough, uniform, and consistent coverage is essential for effective control.

e. Growth Enhancer, Sunburn and Heatstress Protectant:

When applied as directed, benefits such as increased plant vigor and improved yields occur on many fruit and nut trees. Under high ambient temperatures, **Surround CF** reduces canopy temperature and, therefore, can help to reduce heat and water stress. When **Surround CF** is used under certain weather conditions, many pome and stone fruit varieties have shown improved fruit color, smoothness, and size with less russet, sunburn, and cracking.

For sunburn reduction, apply before conditions leading to sunburn occur. Apply concentrate spray at least every 7-14 days, to ensure complete coverage of fruit surfaces. Under windy conditions, particle film may be rubbed off by leaf movement making reapplication necessary.

If initiating sprays for sunburn reduction where there have been no prior sprays, thorough coverage of all fruit surfaces must be in place just prior to sunburn-causing conditions. To achieve optimal coverage, it is necessary to start the spray program with either two concentrate applications 5-7 days apart, or, one application with twice the concentrate use rate of per acre (for example, for nominal 12' trees, 100 lbs per acre in 200 gallons of water).

f. Packing and Processing:

Washing is required unless films weather off before harvest. Most residues wash off with packing line brushing and forced water sprays. Use an approved washing detergent in the packing line and/or wash tank. Use a pre-harvest washing trial to determine if a washing detergent is necessary. Waxing further improves fruit appearance.

II. TREE FRUIT AND NUT CROPS

Apply sufficient spray volume to obtain thorough coverage.

The plant surface must turn a hazy white color after drying. Additional treatments will turn the plant surface a deeper white. This is normal, and is indicative of appropriate film formation. **Two or more coatings are commonly required for complete coverage and for establishment of the foundation of the protective barrier.**

Maintain film coverage to maximize potential PGR and solar protectant benefits. If rainy weather reduces coverage on leaves and fruit, reapply to reestablish coverage.

Rate Tables for Concentrate and Dilute Applications*

Concentrate Application

<u>Approx. Tree Height</u>	<u>Gallons of Mix per Acre</u>	<u>Lbs. of Surround CF per Acre</u>
6	50	25
12	100	50
18	150	75
24	200	100

Dilute Application**

<u>Approx. Tree Height</u>	<u>Gallons of Mix per Acre</u>	<u>Lbs. of Surround CF per Acre</u>
6	100	25
12	200	50
18	300	75
24	400	100

*Rates are based on tree height only. Tree spacing, pruning practices, time of season, and cultivar type affect spray rates. High density or low-density foliage require correspondingly higher or lower rates. **A visual inspection of film deposition and completeness of coverage is crucial for fine-tuning spray amounts.**

**Apply to near-drip. Do not apply to excessive drip.

Continue applications up to 10 days prior to harvest to maximize **Surround CF** horticultural benefits.

Compatible fungicides, insecticides, miticides, and bactericides can be tank mixed or over-sprayed according to their product label use instructions. If tank mixing pesticides, follow the pre-harvest interval of those pesticides but in no cases apply tank mixes within 10 days prior to harvest. If using **Surround CF** alone, reapply as needed up to harvest.

For heat stress relief for tree fruit and nut crops

Apply at 7 to 14 day intervals starting when temperatures reach 90 degrees F or when heat stress is known to occur. Do not spray during bloom. Resume treatments within three days of first petal fall. Widen application intervals to 14 to 21 days as new growth slows or when dry periods occur, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**.

Crops are commonly washed. Most residues wash off with brushing and forced water sprays. An approved fruit cleaning detergent can be used in the packing line and/or wash tank. Apply a pre-harvest washing trial to determine if a detergent is necessary. Waxing further improves fruit appearance.

Pears

For pear psylla control:

- Use dilute applications. Adjust volume per tree height to insure thorough coverage without excessive drip.
- Apply every 7-14 days from green cluster bud through popcorn. A spray at popcorn is recommended to cover the bloom period. Resume **Surround CF** application within three days of first petal fall, following a 10 to 14 day spray schedule under normal non-rainy conditions. Reapplication following heavy rain may be necessary.

- Widen application intervals to 14 to 21 days as new growth slows or when dry periods occur.

For suppression of twospotted spider mite, European red mite, pear rust mite, mealy bug, thrips, leafhoppers, green fruit worm, codling moth, California pear slug, Lygus bugs, obliquebanded leafroller, pandemus leafroller, tarnished plant bug, stink bugs, and fabraea leaf spot:

Spray per directions for psylla control or spray before expected infestation and continue at 7 to 14 day intervals. Do not widen spray intervals beyond 14 days to achieve season-long suppression. Do not spray during bloom. Resume treatments within three days of first petal fall. Supplemental pest control methods may be needed for full control; especially for codling moth.

Continue applications to maximize **Surround CF** horticultural benefits.

Compatible fungicides, insecticides, miticides, and bactericides can be tank mixed or over-sprayed according to their product label use instructions. If tank mixing pesticides, follow the pre-harvest interval of those pesticides but in no case apply tank mixes within 10 days prior to harvest. If using **Surround CF** alone, reapply as necessary up to harvest.

Apples

For control of over-wintering obliquebanded leafroller

- Apply two sprays 7 days apart from delayed dormant to pink.

For control of leafhoppers

- Apply every 7 to 14 days starting within three days of first petal fall.

For suppression of European red mite, apple rust mite, two-spotted mite, codling moth, plum curculio, Leafminers, apple sucker, Lygus bugs, pandemus leafroller, tarnished plant bug, stink bugs, apple maggot, thrips, green fruitworms, and aphids:

- Apply at 7 to 14 day intervals starting at delayed dormant. Do not spray during bloom. Resume treatments within three days of first petal fall applying at 7 to 14 day intervals. Widen application intervals to 14 to 21 days as new growth slows or when dry periods occur. Be sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control methods as needed for full control; especially for codling moth.

Improved fruit quality can occur if **Surround CF** applications resume at initial petal fall and are continued up until 10 days prior to harvest. When applied at labeled rates and frequencies, benefits such as increased plant vigor and improved yields occur in certain apple cultivars. Under high ambient temperatures, **Surround CF** reduces canopy temperature and, therefore, can help to reduce

heat and water stress. Many apple cultivars have shown improved fruit color, smoothness, and size with less russet, sunburn, and cracking when **Surround CF** is used.

For sunburn reduction, apply before conditions leading to sunburn occur. Apply concentrate spray at least every 7-14 days, to ensure complete coverage of fruit surfaces. Under windy conditions, particle film may be rubbed off by leaf movement making reapplication necessary.

If initiating sprays for sunburn reduction where there have been no prior sprays, thorough coverage of all fruit surfaces must be in place just prior to sunburn-causing conditions. To achieve optimal coverage, start the spray program with either two concentrate applications 5-7 days apart, or, one application with twice the concentrate use rate of per acre (for example, for nominal 12 ft. trees, 100 lbs per acre in 200 gallons of water).

Tank mix **Surround CF** with compatible fungicides, insecticides, miticides, and bactericides, or over-spray according to the product label use instructions. If tank mixing pesticides, follow the pre-harvest interval of those pesticides but in no cases apply tank mixes within 10 days prior to harvest. If using **Surround CF** alone, reapply as needed up to harvest.

Stone Fruit - Apricots, cherries, nectarines, peaches, plums, and prunes

For control of Japanese beetle

- Apply one week prior to the expected infestation period and follow with three to four additional applications at 5 to 7 day intervals.

For suppression of European red mite, twospotted spider mite, peach silver mite, thrips, stink bugs, oriental fruit moth, tarnished plant bug, European earwig, June beetle, peach twig borer, naval orange worm, and plum curculio

- Apply at 7 to 14 day intervals starting at bud swell and ending at pink. Do not spray during bloom. Resume treatments within three days of first petal fall. Widen application timing when new growth slows or when dry periods occur. Be sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control methods as needed for full control.

Continue applications to maximize **Surround CF** horticultural benefits.

Tank mix **Surround CF** with compatible fungicides, insecticides, miticides, and bactericides, or over-spray according to the product label use instructions. If tank mixing pesticides, follow the pre-harvest interval of those pesticides but in no cases apply tank mixes within 10 days prior to harvest. If using **Surround CF** alone, reapply as necessary up to harvest.

Special Washing Considerations for Stone Fruit: Washing is required. Most residues wash off with brushing and forced water sprays. Use an approved fruit cleaning detergent in the packing line and/or wash tank. Prior to brushing, a pre-soak in approved fruit cleaning

detergent is usually needed for fuzzy peaches. Apply a pre-harvest washing trial to determine if a detergent is necessary. Waxing further improves fruit appearance.

Citrus Fruits - Lemons, Limes, Grapefruit, and Oranges

For suppression of thrips and mites

- Apply at 7 to 14 day intervals starting within three days of first petal fall. Widen application timing during dry periods to once every 14 to 21 days, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control methods as needed for full control.

Continue applications to maximize **Surround CF** horticultural benefits.

Tank mix **Surround CF** with compatible fungicides, insecticides, miticides, and bactericides, or over-spray according to the product label use instructions. If tank mixing pesticides, follow the pre-harvest interval of those pesticides but in no cases apply tank mixes within 10 days prior to harvest. If using **Surround CF** alone, reapply as necessary up to harvest.

Nut Trees - Walnuts, Pecans, and Almonds

For suppression of mites

- Apply at 7 to 14 day intervals starting after nut set. Widen application timing during dry periods to once every 14 to 21 days, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control as needed for full control.

Continue applications to maximize **Surround CF** horticultural benefits.

Tank mix **Surround CF** with compatible fungicides, insecticides, miticides, and bactericides, or over-spray according to the product label use instructions. If tank mixing pesticides, follow the pre-harvest interval of those pesticides but in no cases apply tank mixes within 10 days prior to harvest. If using **Surround CF** alone, reapply as necessary up to harvest.

III. SMALL FRUIT CROPS

Apply sufficient spray volume to obtain thorough coverage.

Apply only to fruits to be used for processing.

To help reduce Surround CF residues, apply plain water via normal sprayer prior to harvest. This is particularly helpful for wine grapes.

Continue applications to maximize **Surround CF** horticultural benefits.

Tank mix **Surround CF** with compatible fungicides, insecticides, miticides, and bactericides, or over-spray according to the product label use instructions. If tank mixing pesticides, follow the pre-harvest interval of those pesticides but in no cases apply tank mixes within 10 days prior to harvest. If using **Surround CF** alone, reapply as necessary up to harvest.

Blackberries, Raspberries, Dewberries, Boysenberries, Loganberries, and Blueberries

For suppression of blackberry psyllid, European raspberry aphid, Japanese beetle, leafhoppers, thrips, twospotted spider mite, and European red mite

Apply 12.5 to 50 lbs. per acre at 7 to 14 day intervals starting after fruit set. Widen application timing during dry periods to once every 14 to 21 days, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control methods as needed for full control.

Wine Grapes

For suppression of European red mite, two-spotted spider mite, omnivorous leafroller, grape leafroller, grape leaf skeletonizer, leafhoppers, Japanese beetle, June beetle, and thrips

Apply at 12.5 to 50 lbs per acre at 7 to 14 day intervals starting after fruit set. Widen application timing during dry periods to once every 14 to 21 days, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control methods as needed for full control.

IV. FIELD AND VEGETABLE CROPS

Apply sufficient spray volume to obtain thorough coverage.

Tank mix **Surround CF** with compatible fungicides, insecticides, miticides, and bactericides, or over-spray according to the product label use instructions. If tank mixing pesticides, follow the pre-harvest interval of those pesticides but in no cases apply tank mixes within 10 days prior to harvest. If using **Surround CF** alone, reapply as necessary up to harvest.

For difficult to wash or unwashed crops, especially in low rainfall areas, stop spraying 30 days prior to harvest or when fruit are small. For crops where the produce is not directly sprayed by **Surround CF** (e.g. potato, shelled beans, and radishes), apply **Surround CF** up to the day of harvest. Applications to cotton can be made up to 10 days before harvest.

Washing is required. Most residues wash off with brushing and forced water sprays. Use an approved cleaning detergent in the packing line and/or wash tank. Apply a pre-harvest washing trial to determine if a detergent is necessary.

For heat stress relief and sunburn protection of field and vegetable crops

- Apply at 7 to 14 day intervals starting when heat stress or sunburn is known to occur. Widen application timing to 14 to 21 days as new growth slows or when dry periods occur, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**.

Beans

For suppression of alfalfa looper, aphids, Fall armyworm, flea beetle, Mexican bean beetle, European red mites, Japanese beetle, leafhoppers, Lygus bug, stink bugs, tarnished plant bug, three cornered alfalfa hopper, thrips, twospotted spider mite, velvetbean caterpillar

- Apply 6.25 to 12.5 lbs per acre at 7 to 14 day intervals starting after fruit set. Widen application timing during dry periods to once every 14 to 21 days, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control methods as needed for full control.

Collards, Garden Beet, Sugar beet, Horseradish, Radishes, Rutabagas, and Turnips

For suppression of European red mites, flea beetle, harlequin bug, leafhoppers, tarnished plant bug, twospotted spider mite, imported cabbage worm

Apply 6.25 to 12.5 lbs per acre at 7 to 14 day intervals starting after fruit set. Widen application timing during dry periods to once every 14 to 21 days, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control methods as needed for full control.

Cotton

For suppression of cotton fleahopper, European red mites, flea beetles, tarnished plant bug, thrips, twospotted spider mite, whiteflies

- Apply 6.25 to 12.5 lbs per acre at 7 to 14 day intervals starting after fruit set. Widen application timing during dry periods to once every 14 to 21 days, being sure to maintain good film coverage to maximize potential benefits of **Surround CF**. Use supplemental pest control methods as needed for full control.

Potato, Tomato, Eggplant, Pepper

For suppression of European red mites, Colorado potato beetle, flea beetles, lace bugs, leafhoppers, stink bugs, tarnished plant bug, tomato fruit worm, tomato pinworm, twospotted spider mite

- Apply 6.25 to 25 lbs per acre at 7 to 14 day intervals starting one week before infestation is expected. Use supplemental pest control methods as needed for full control.

Onions

For suppression of onion thrips

- Apply 6.25 to 12.5 lbs per acre at 7 to 14 day intervals starting one week before infestation is expected. Use supplemental pest control methods as needed for full control.

Cucurbits

For suppression of cucumber beetles

- Apply 6.25 to 25 lbs per acre at 7 to 14 day intervals starting one week before infestation is expected. Use supplemental pest control methods as needed for full control.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a dry, sheltered location. Product is slippery when wet. In case of spill or leak, avoid breathing dust, clean up and dispose of wastes in compliance with applicable Federal, State, and local regulations.

PESTICIDE DISPOSAL: Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, State, and local procedures.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of the smoke.

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, or good application practices, all of which are beyond the control of Tessengerlo Kerley, Inc., or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. Tessengerlo Kerley, 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 Tessengerlo Kerley, Inc. Except as warranted by this label, Tessengerlo Kerley, 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 Tessengerlo Kerley, Inc. for any cause of action relating to the handling or use of this product is a claim of damage, and in no event shall damages or any other recovery of any kind against Tessengerlo Kerley, Inc. exceed the price of the product which causes the alleged loss, damage, injury, or other claim. To the extent consistent with applicable law, Tessengerlo Kerley, Inc. shall not be liable and any and all claims against Tessengerlo Kerley, Inc. are waived, for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income, whether or not based on the negligence of Tessengerlo Kerley, Inc. breach of warranty, strict liability in tort, or any other cause of action. Tessengerlo Kerley, Inc. and the seller offer this product, and the buyer and users accept it, subject to the foregoing conditions of sale and limitations of warranty, liability and remedies.

Surround CF Crop Protectant

Surround[®] is a registered trademark of Tessengerlo Kerley, Inc.

Early Season Use SubLabel

Surround® CF CROP PROTECTANT

Surround CF Crop Protectant Forms a Barrier Film, Which Acts as a Broad Spectrum Agricultural Crop Protectant for Controlling Damage from Labeled Insect Pests. Surround CF is Specially Designed for Rapid Mixing in Cold Water.

ACTIVE INGREDIENT:	
Kaolin:.....	95.0%
OTHER INGREDIENTS:.....	
	5.0%
	Total: 100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

Manufactured by:
Tessenderlo Kerley, Inc.
2255 North 44th Street
Suite 300
Phoenix, AZ 85008-3279
1-800-525-2803

Net Weight 50 lbs (22.6 kg)

EPA Reg. No. 61842-16

EPA Est. No. 51036-GA-001

The use of Surround® CF in agricultural crop protection applications is covered by US Patents 6,027,740; 6,069,112; 6,110,869 and 6,156,327.

FIRST AID	
If in Eyes:	<ul style="list-style-type: none"> • 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 eye. • Call a poison control center or doctor for treatment advice.
If Inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor or gong for treatment. For emergency information on Surround CF Crop Protectant, call the National Pesticides Information Center at 1-800-858-7378, 6:30 AM to 4:30 PM Pacific time (PT), seven days a week. During other times, call the poison control center 1-800-222-1222.</p>	

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Harmful if inhaled. May cause irritation to the respiratory system. Avoid breathing dust or mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT

Applicators, pickers, and other handlers must wear:

- Long sleeved shirt, long pants
- Socks and shoes
- Protective Eyewear
- A dust/mist-filtering respirator with (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any N, R, P, or HE filter.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Nuisance dust masks and goggles are recommended for harvesters especially when plants are shaken during harvest.

ENVIRONMENTAL HAZARDS

For terrestrial uses. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

Do not apply Surround CF through any type of irrigation system.

Surround CF must be used in accordance with the directions on this label or in separately published Tessenderlo Kerley, Inc. supplemental labeling.

AGRICULTURAL USE REQUIREMENTS

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. 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, in forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

The restricted-entry interval (REI) is 4 hours from the time of application. Do not allow worker entry into treated areas during the restricted-entry interval (REI).

Personal-protection equipment required for early entry workers are long-sleeved shirts, long pants, and shoes plus socks.

I. APPLICATION INSTRUCTIONS

Surround CF protectant forms a mineral-based particle film intended for protection of agricultural crops. When Surround CF is applied to plants, a dry white film is formed. Surround CF is specially designed for rapid mixing into cold water (less than 40° F). Pests may be listed as suppressed, which means that full control may not be achieved, and supplemental methods may be needed to enhance the level of control. **Thorough, uniform, and consistent coverage is essential throughout the infestation or stress period.**

- **Pre-harvest intervals (PHI):** Surround CF applications on pears are only allowed until fruit set. Do not use the Surround CF formulation after fruit set. Other Surround formulation(s) are designed for uses after fruit set.

a. Mix Instructions:

For Agitating Sprayer Tanks

1. Slowly add Surround CF powder into the water in a recirculating sprayer tank, making sure to keep agitation brisk. Do not add Surround CF to a sprayer tank that does not have adequate agitation. Add directly into the mix basket if pump recirculation empties into the mix basket. If there is no mix basket, add Surround CF very slowly to the recirculating water. Do not dump Surround CF directly into pump intake area as this could plug the filter or intake. Mix thoroughly.
2. Add tank mix pesticides, such as oils, if any.
3. Continue agitation until all of the material is sprayed from the tank.
4. At the end of the application, spray until empty and flush system and nozzles with fresh water. Periodically check in-line strainer and clean if necessary. Properly dispose of rinse water.

For Non-agitating Sprayer Tanks, Such as Handheld and Backpack Sprayers

1. Use Surround CF powder at a rate of ¼ to ½ lb of Surround CF powder per one gallon of water. One-half pound is approximately 3 cups. For sprayers difficult to shake, premix in a 5 gallon bucket, stir, and pour suspension into sprayer.
2. While stirring or swirling, slowly add Surround CF powder into ¼ to ½ of the water that will be used in the batch.
3. Mix thoroughly by shaking the closed container vigorously for 30 seconds.
4. Add tank mix pesticides, such as oils, if any.
5. Add the remainder of the batch water and shake for an additional 30 seconds.
6. Shake the sprayer occasionally during application.
7. At the end of the application, spray until empty and flush system and nozzles or, blow air pressure out of the line and nozzle then store in a cool place. Apply the leftover mix within two weeks to avoid spoilage. Rinse the sprayer before next batch.

b. Compatibility:

Surround CF is not affected by most other insecticides, miticides (including agricultural oils), and fungicides. However, to ensure compatibility, test tank mixes before use. When mixing with other products, make up a small batch and observe slurry and film characteristics. Curdling, precipitation, lack of film formation, or changes in viscosity are signs of incompatibility. **Add tank mix pesticides after the Surround CF powder has been added.** Use of anti-foaming agents can interfere with proper coverage.

Keep tank mix combinations agitated and apply immediately. Do not allow combinations to sit for prolonged periods in the chemical supply tank.

Read and follow the applicable restrictions and limitations and Directions For Use on all products involved in the tank mix. The most restrictive labeling applies to the tank mix.

Do not tank mix with other white mineral particulate products like diatomaceous earth or other sunburn materials. Applications of Surround CF over such products or oversprays of such products over Surround CF can impair efficacy.

Do not use additional spreader/stickers not approved by Tessengerlo Kerley, Inc.

Do not tank mix Surround CF with products that specify other spreader/stickers if jar tests prior to application show curdling or resulting spray coverage shows excessive beading or poor film formation.

c. Conditions of Application

Rates: Rate is dependent on the amount of foliage or branches requiring coverage.

Concentration (the amount of Surround CF per 100 gallons of water): Use Surround CF at concentrations of 25 to 50 lbs Surround CF per 100 gallons, but concentrations of up to 100 lbs per 100 gallons are allowed for specific uses.

Coverage: Use sufficient spray volume to obtain thorough **near drip** coverage. Two or more applications are desirable for complete coverage. For optimal performance as an insecticide, applications must coat all portions of plant that are to be protected, including both sides of the leaves. If coverage is insufficient, apply another spray. Dwarf, semi-dwarf, and otherwise well-pruned trees will be easier to cover than large trees. Optimum efficacy will be more difficult to achieve in large trees due to increased difficulty in achieving thorough coverage.

Applications to tree crops can be made with commercial air blast or high-pressure sprayers that provide enough air turbulence to coat both sides of the leaves, bark, and fruit. Maintain tractor speed less than 3 mph when using airblast sprayers.

Plant Color Change: Plant surfaces will typically turn a hazy white color after drying. Additional treatments will turn the plant surfaces a deeper white. This is normal, and indicates appropriate film formation.

Foliage Dryness: Do not apply to dripping wet foliage.

Spray Methods: For agricultural uses, apply via air blast, high-pressure hand gun, or boom sprayers. Do not apply Surround CF through sprinkler irrigation systems. Observe specific crop label instructions for directions regarding spray volume. Calibrate spray equipment per equipment manufacturer to deliver the required volume. At labeled concentrations, the flow rate of suspended Surround CF is similar to water. Use strainers, preferably no finer than 40 mesh, in the spray system and behind each nozzle.

When the dry foliage has lost its white appearance, reapplication is necessary. Heavy rainfall, new growth, and wind erosion will affect film quality. Reapply to re-establish coverage after heavy rain as soon as the foliage is dry. However, reapplication is not necessary if all target surfaces remain thoroughly coated. Do not apply Surround CF to the point where an excessively thick coating is formed.

Aerial Application: Aerial applications are more imprecise than other spray applications; as a result, they often result in diminished control of insects. When using aerial applications, take all precautions needed to minimize or eliminate drift, e.g., do not spray under windy or gusty conditions. Make applications not more than ten feet above the top of the largest plant unless a greater height is required for aircraft safety. When making aerial applications at low relative humidity, increase droplet size to compensate for evaporation. Do not use spray drift agents that have not been approved by Tessenderlo Kerley, Inc.

Non-Target Surfaces: Do not apply sprays of Surround CF where the resulting visible white film will be undesirable or cannot be washed off, such as porous wood, masonry, asphalt, and other valuable goods.

Pears

- Surround CF is specially designed for rapid mixing into cold mix water (less than 40° F) that is common in early spring conditions.
- **Do not use the Surround CF formulation after fruit set. Other Surround formulation(s) are designed for post fruit set uses.**
- Surround CF is designed to be used with nonphytotoxic superior-type agricultural spray oils for best film formation.
- For pre-bloom sprays, add at least 0.5 to 1.5 gallons of dormant or summer spray oils per 50 lbs of Surround CF. The preferred amount for optimum film formation is 0.75 gallons of oil per 50 lbs of Surround CF.
- Oil amounts above 2 gallons per 50 lbs, will reduce the visual whiteness of the particle film. Whiteness may re-appear over time as the oils evaporate or absorb into bark.
- See mix instructions for order of addition.
- Follow all oil label directions.

PEST	LBS/ACRE	DIRECTIONS
Pear psylla	50 ¹	<ul style="list-style-type: none"> • On mature pear trees use 100-200 gal/acre. • Prebloom: Make 3 applications, applying every 7-10 days starting at delayed dormant, but no later than green cluster bud. • Spring populations can be reduced with a fall or winter application of other Surround products.
Over-wintering leafrollers*, especially obliquebanded leafroller (OBLR)		Apply 2 sprays 7 days apart starting just prior to green tip or at initial emergence of leafroller larvae.
¹ Rates of 100 lbs in 100 to 200 gallons allowed during pre-bloom for high infestation. * Suppression only. Use supplemental pest control methods as needed for complete control.		

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a dry, sheltered location {away from food or feed}. Product is slippery when wet. In case of spill or leak, avoid breathing dust, clean up and dispose of wastes in compliance with applicable Federal, State, and local regulations.

PESTICIDE DISPOSAL: Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to applicable Federal, State, and local procedures.

CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available. Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of the smoke.

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, or good application practices, all of which are beyond the control of Tessengerlo Kerley, Inc., or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. Tessengerlo Kerley, 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 Tessengerlo Kerley, Inc. Except as warranted by this label, Tessengerlo Kerley, 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 Tessengerlo Kerley, Inc. for any cause of action relating to the handling or use of this product is a claim of damage, and in no event shall damages or any other

recovery of any kind against Tessenderlo Kerley, Inc. exceed the price of the product which causes the alleged loss, damage, injury, or other claim. To the extent consistent with applicable law, Tessenderlo Kerley, Inc. shall not be liable and any and all claims against Tessenderlo Kerley, Inc. are waived, for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income, whether or not based on the negligence of Tessenderlo Kerley, Inc. breach of warranty, strict liability in tort, or any other cause of action. Tessenderlo Kerley, Inc. and the seller offer this product, and the buyer and users accept it, subject to the foregoing conditions of sale and limitations of warranty, liability and remedies.

Surround CF Crop Protectant

Surround[®] is a registered trademark of Tessenderlo Kerley, Inc.