Surround® At Home® Crop Protectant

Surround At Home Crop Protectant forms a Barrier Film, which acts as a Broad Spectrum Crop Protectant for Home, Landscape, and Garden. Use for controlling damage from various Insect, Mite, and Disease Pests, Growth Enhancer, and Protectant against Sunburn and Heat Stress.

For External Household Use Only

Do not spray where a visible white film is undesirable or cannot be washed off such as porous wood, masonry, asphalt, and other valuable goods.

ACTIVE INGREDIENT:

Kaolin .................................................... 95.0%
Other INGREDIENTS................................. 5.0%
Total: 100.0%

Contains Non-Plant Food Ingredient:
Guaranteed Analysis
Active Ingredients
95% Kaolin
9% Inert Ingredients

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Reg. No. 7000-14-5872    EPA establishment No. 56872-IN-001

Growth enhancer uses are not registered in California.
The use of Surround® at Home® in crop protection applications is covered by U.S. Patents: 6,027,740; 6,069,112; 6,110,869; and 6,156,327.

Manufactured for:
GardensAlive!®, Inc.
706 W. Cumberland St.
Lewisburg, OH 45338
513-354-1483
www.GardensAlive.com

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Do not apply directly to water. Do not contaminate water when disposing of equipment wash water or rinseate. Remove contaminated clothing and wash clothing before reuse.

ENVIRONMENTAL HAZARDS
Do not apply directly to water. Do not contaminate water when disposing of equipment wash water or rinseate.

DIRECTIONS FOR USE
It is a violation of federal law to use this product in a manner inconsistent with it labeling.

I. GENERAL INFORMATION
Surround® is a mineral-based particle film intended for protection of crops, and plants in greenhouses, home landscapes and gardens. When Surround® is applied to plants, a dry white film results. Many pests are listed as suppressed, which means that full control may not be achieved, and supplemental methods will be needed to enhance the level of control. Thorough, uniform, and consistent coverage is essential throughout the infestation or stress period.

For crops that will not be washed where a residual white film is not desired, make applications early-season only. White residue at harvest can be minimized if applications to smooth skin crops like apples stop when the fruit is approximately 1/4 of its expected size.

DIRECTIONS FOR USE
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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION: Causes moderate eye irritation. Avoid contact with eyes or the clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash clothing before reuse.

ENVIRONMENTAL HAZARDS
Do not apply directly to water. Do not contaminate water when disposing of equipment wash water or rinseate.

DIRECTIONS FOR USE
It is a violation of federal law to use this product in a manner inconsistent with it labeling.

I. GENERAL INFORMATION
Surround® is a registered trademark of Tessenderlo Kerley, Inc.
### Plant Response Precautions: Surround At Home keeps plant surfaces cooler and an advance or delay in maturity can result. Some and stone fruit can have maturity delays of 3 to 7 days, especially in cool regions.

### MIX INSTRUCTIONS

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

The following mixing sequence must be followed:

1. Use Surround At Home powder at a rate of 1/4 to 1/2 lb. of Surround At Home 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 At Home powder into 1/4 to 1/2 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. See compatibility section below before adding any tank mix pesticides.

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 bath.

#### Compatibility:

Surround At Home is not generally 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. Curling, precipitation, lack of film formation, or changes in viscosity are signs of incompatibility.

Add tank mix pesticides after the Surround At Home has been added. Do not tank mix with other white mineral particulate products like diatomaceous earth or other sunburn materials.

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### Non-food Crops

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<th>Plant Category</th>
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<td>Landscape plants, flowers and garden transplants</td>
<td>Non-food Crops</td>
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**APPLICATION INSTRUCTIONS**

1. Use Surround at a rate of 1/4 to 1/2 lb. of Surround At Home powder per one gallon of water.

2. While stirring or swirling, slowly add Surround At Home powder into 1/4 to 1/2 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. See compatibility section below before adding any tank mix pesticides.

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6. Shake the sprayer occasionally during application.

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### Ornamental Plants

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2. While stirring or swirling, slowly add Surround At Home powder into 1/4 to 1/2 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. See compatibility section below before adding any tank mix pesticides.

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 bath.

#### Compatibility:

Surround At Home is not generally 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. Curling, precipitation, lack of film formation, or changes in viscosity are signs of incompatibility.

Add tank mix pesticides after the Surround At Home has been added. Do not tank mix with other white mineral particulate products like diatomaceous earth or other sunburn materials.

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### Special Directions

Flower and ornamental plants will obtain a white covering from applications of Surround At Home. If this is undesirable do not spray. On cut flower plants, it is best to spray only the leafy foliage of the plant, so that cuttings are not affected.
General Application Instructions (see, also, specific crop use instructions):

Rates: Rate is dependent on the amount of foliage that needs to be covered.

Concentration (the amount of Surround At Home per 1 gallon of water):
Use Surround At Home at concentrations of 1.4 to 1.5 lb. (or 1.5 to 3 cups) per gallon of water.

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 additional sprays are necessary. Draw, semi-draw, and otherwise well-pruned trees will be easier to cover than large trees. Optimum efficacy may be more difficult to achieve in large trees due to increased difficulty achieving thorough coverage.

Reapplication is generally required every 7-14 days. Intervals can be widened to 14 to 21 days later in the season when new growth diminishes.

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 is indicative of appropriate film formation.

Foliation Dryness: Do not apply to wet foliage.

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 is necessary. Heavy rainfall, new growth, and wind erosion will affect film quality. Reapply to re-establish coverage after heavy rain as soon as is necessary.

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Leafy Vegetables (non-Brassica)  

**Such as arugula, celery, lettuce, parsley, rhubarb, and spinach**

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<td>Aphids, armyworm, cicadas, cutworms, flea beetles, grasshoppers, leafhoppers, loopers, sea clads, thrips, weevils</td>
<td>Suppression only*. Use only in early season to avoid residual at harvest. Start prior to infestation. Apply every 7 - 10 days being sure to maintain coverage throughout infestation.</td>
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* For complete control is needed, consider using supplemental controls.

Other Crops

**Volume**

Sunburn Reduction: Apply before conditions leading to sunburn occur. If initiating sprays for sunburn reduction where there have been no prior sprays, apply initial 1-2 applications at full rates no more than 7 days apart. Depending upon the length of the high heat period, three to four applications in total may be needed, with subsequent applications every 14-21 days. Surround At Home may be rubbed off by leaf movement making reaplication necessary.

**Concentration** (the amount of Surround At Home per one gallon of water): Use concentrations of 1.5 to 3.0 caps of Surround At Home per gallon of water.

**Tree Fruit**

**Volume**

Asparagus

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**Laconobia**

**Oviposition:** Leafhoppers Apply first spray within 3 days of first leafroller (OBLR) of leafroller larvae. Especially oblique-banded prior to green tip or at initial emergence. Over-wintering leafrollers, Apply 2 sprays 7 days apart starting just leafspot, powdery mildew, pressure areas.

Cedar apple rust, fabrea generally necessary especially in high suppression only*.

Supplements are generally necessary especially in high pressure areas.

**APPLES**

**APPLICATION INSTRUCTIONS**

- Apply at least one spray infestation period.
- Continue every 7-14 days during petal fall or at initial infestation.
- Spraying may start at the beginning of first spray within 3 days of first leafroller and apply at least one spray within 3 days of first petal fall or at initial infestation.

**Pea and Apple:** aphid, crickets, European red mite, grasshoppers, green fruit worms, leafhoppers, Lygus bug, Mormon cricket, periodical cicada, San Jose scale, stink bug, tarnished plant bug, thrips, two-spotted spider mite.

**Supplements**

- Aphids, crickets, European red mite, grasshoppers, green fruit worms, leafhoppers, Lygus bug, Mormon cricket, periodical cicada, San Jose scale, stink bug, tarnished plant bug, thrips, two-spotted spider mite.

**Suppression only**.* Supplements are generally necessary especially in high pressure areas.

**Leafhoppers**

Apply first spray within 3 days of first leafroller and apply at least one spray within 3 days of first petal fall or at initial infestation. Continue every 7-14 days during infestation period.

**Lactobacina**

**Oviposition:** Apply at least one spray at start of oviposition and a second spray within 5-7 days.

**Apples or Pear Diseases**

Cedar apple rust, fabrea generally necessary especially in high suppression only*.

**APPLICATION INSTRUCTIONS**

- Leafhoppers: Apply first spray within 3 days of first leafroller and apply at least one spray within 3 days of first petal fall or at initial infestation. Continue every 7-14 days during infestation period.

**Pears and Apples:** aphid, crickets, European red mite, grasshoppers, green fruit worms, leafhoppers, Lygus bug, Mormon cricket, periodical cicada, San Jose scale, stink bug, tarnished plant bug, thrips, two-spotted spider mite.

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**Lactobacina**

**Oviposition:** Apply at least one spray at start of oviposition and a second spray within 5-7 days.
### Root and Tuber Vegetables

**Such as potatoes, garlic, onion, horseradish, radish, rutabaga, carrot, sweet potato and turnip**

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* For complete control is needed, consider using supplemental controls.

### Fruiting Vegetables

**Such as tomato, pepper and including eggplant**

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* For fresh use apply only up to 1/4 fruit size

* For complete control is needed, consider using supplemental controls.

### Horticultural Benefits

**Surround® At Home can often improve fruit quality (See General Information/Growth Enhancer, Sunburn and Heat Stress Protectant for general horticultural benefits) if applications start at petal fall and are continued up until harvest. Many pear cultivars, particularly Comice and Anjou varieties have shown improved improved fruit color, smoothness, and size with less russet when Surround® At Home is used.**

### Diseases

**Surround® At Home can often enhance the efficacy of wettapable sulfur and/or lime-sulfur against scab, powdery mildew, sooty blotch, and flyspeck. See Product Guides for specific mixture instructions. Fungicides, like sulfur or lime-sulfur against scab, powdery mildew, sooty blotch, and flyspeck. See Product Guides for specific mixture instructions. Fungicides, like sulfur or lime-sulfur, can often improve fruit quality.**

### Fruiting Vegetables

**Such as tomato, pepper and including eggplant**

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Stone Fruit
Such as apricot, cherry*, nectarine, peach, plum, pistachio and prune

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<td>Start one week prior to expected infestation and follow with 3 to 4 applications at 5 - 7 day intervals.</td>
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<td>Suppression* only* for OBLR. Start at pink bud and continue applications at 5 - 7 day intervals through jacket split.</td>
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| Leafhoppers including sharpshooters | Suppression only*. Start before expected infestation, if possible.  
- Prebloom: Apply at 7 - 14 day intervals up to bloom.  
- Post harvest: Apply 2 or more applications at 7 - 14 day intervals. |
| Aphid, cherry fruit flies, crickets, European red mite, European earwig, grasshoppers, June beetles, leafhoppers, looper, peach tree borer, naval orange worm, oriental fruit moth, prachtree borers, peach silver mite, peach twig borers, stink bugs, tarnished plant bug, two spotted spider mites, tufted apple bud moth | Suppression only*. Start before expected infestation, if possible and continue at 7 - 14 day intervals. |
| Plum curculio | Suppression only*. Apply at 7 day intervals throughout egg laying period. |


deer and rabbit damage may be reduced (suppressed) on garden vegetables. start applications prior to animal feeding and maintain thorough coverage during feeding period. for plants on which surround® at home does not adhere well, re-sprays as soon as possible are required following rainfall or protection will be lost.

Legumes Vegetables
Such as bean, pea and soybean

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Special Directions
Only spray beans that are difficult to wash, such as string beans when beans are small.

8

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8 13
Special Directions

Harvest parameters may be altered and maturity may be delayed especially in white varieties. Closely monitor harvest parameters to determine optimal time to harvest. Changes in harvest parameters can affect taste. Do not spray table grapes from bloom to harvest. Infestations may be sprayed up to bloom, and again after harvest.

Garden Vegetables

Volume: Apply to near-drip. Do not apply to run-off to avoid waste and poor coverage.

Concentration (the amount of Surround At Home per 1 gallon of water): Use concentrations of 1.5 to 3.0 cups of Surround At Home per gallon of water.

Crickets, European red mite, two-spotted spider mite, rose chaffer, omnivorous leafhopper, grape berry moth, grape leafhopper, grape leaf folder, grasshoppers, grape leaf skeletonizer, leaf hoppers, Japanese beetle, June beetle, thrips

Suppression only*. Start as infestation occurs, applying a minimum of 2 - 3 applications by applying every 7 - 14 days.

Leaffoppers including sharpshooter

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Citrus Fruits

Special Washing Considerations for Stone Fruit: For fresh fruit, special washing is required, especially for fuzzy peaches. Most resiudals wash off with brushing and forced water sprays. Prior to brushing, a pre-soak in approved fruit cleaning detergent is usually needed for fuzzy peaches. If fresh peaches cannot be washed as noted above, discontinue sprays when the fruit are approximately 3/4 inch in diameter. Residues do not affect processed fruit quality.

For cherries, discontinue applications when fruit are half size (approximately 1/4 inch) if no washing is available.

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**Nut Crops**

**Volume:** Apply to near-drip, not to excessive run-off.

**Concentration** (the amount of Surround At Home per gallon of water): Use concentrations of 1.5 to 3.0 cups of Surround At Home per gallon of water.

**Tree Nuts**
Such as almond, beech nut, Brazil nut, cashew, chestnut, filbert, hickory nut, macadamia nut, pecan, walnut and including pistachio.

**APEX** APPLICATION INSTRUCTIONS

Aphids such as pecan, black, and yellow aphid, codling moth, red mealy bug, peach twig barn, thrips

Concentration (the amount of Surround At Home per gallon of water): Use concentrations of 1.5 to 3.0 cups of Surround At Home per gallon of water.

**Berries**
Such as blackberry, raspberry, dewberry, huckleberry, loganberry, elderberry, blueberry, ribes such as currant and gooseberry and including cranberry.

**APEX** APPLICATION INSTRUCTIONS

Blackberry maggot Suppression only*. Apply 2 sprays 7 days apart before expected infestation or first detection of infestation. Continue applications every 7 - 14 days during egg lay period.

Blueberry maggot Suppression only*. Apply 2 sprays 7 days apart before expected infestation or first detection of infestation. Continue applications every 7 - 14 days during egg lay period.

Special Directions
Apply only to fruits to be used for processing (cooking) as the white film will be difficult to remove completely. Only apply on berries up to the first three weeks after fruit set as trace residues will be difficult to remove after harvest.

**Grapes**

**APEX** APPLICATION INSTRUCTIONS

Chromatoidea Suppression only*. Apply 1 - 2 treatments 7 days apart starting at bud break.

SUNBURN AND HEAT STRESS
Suppressions only. Start as infestation occurs. Apply every 7 - 14 days throughout infestation. For codling moth, apply a minimum of 2 sprays per generation.

Sunburn and heat stress See General Information/Growth Enhancer, Sunburn and Heat Stress Protectant and Light Reflectant/Sunburn Reduction.

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**Small Fruits**

**Volume:** Apply to near-drip. Do not apply to run-off to avoid waste and poor coverage. The volume of water/acre required will increase throughout the growing season in relationship to the increasing size of the crop and its foliage.

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