

BRANDT

Other oils' larger droplets can
cause burn to the plant

Saf-T-Side®

There is a Difference

Growers prefer SAF-T-SIDE's
smaller droplets providing
uniform coverage with less
burn or stress to the plant.

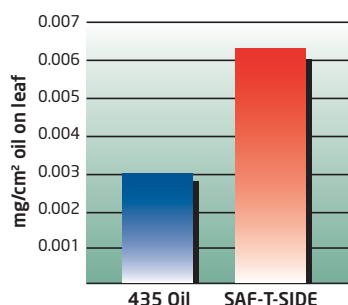
Spray Oil Emulsion, Insecticide and Miticide

OMRI®
L i s t e d

The Difference.

Saf-T-Side is unique.

No EPA registered insecticidal oil compares in either physical attributes or performance.



In aerial field trials, SAF-T-SIDE and 435 Spray Oil were applied at the rate of 2.5 gallons per acre. Thornton Laboratories found that .003 mg/cm² were found to have deposited on the leaves, while .0067 mg/cm² of SAF-T-SIDE were found on the both the top and bottom of the leaves (more than twice as much coverage).

Safe and Effective

The proven leader in pesticidal performance and reliability, SAF-T-SIDE is a unique concentrate of pre-emulsified highly refined, high paraffinic, low aromatic oil. SAF-T-SIDE provides effective pest and disease control in a broad range of crops and ornamentals. SAF-T-SIDE is EPA registered; OMRI listed, and meets and even exceeds most world wide standards for Agricultural Spray Oils.



Agricultural Spray Oils are effective pest control mechanisms, but their efficacy as well as hazards are directly related to how long the oil remains on the plant. Most light oils (boiling point less than 355° F) are considered to be less effective or non-pesticidal at all because they don't remain on the plant long enough to suffocate the pests, while most heavy oils (boiling point greater than 565° F) are considered to be hazardous to plants.

SAF-T-SIDE is in the optimal "narrow" range, providing optimal pesticidal activity and durability without the hazards known to heavier oils.

Why is Saf-T-Side Pre-Emulsified?

SAF-T-SIDE is pre-emulsified to produce more stable and effective results. Under high speed shearing, the Brandt process breaks down the oil droplets, reducing them from typically 700 microns in diameter to approximately 50 microns (1/14th its original size). To keep these droplets apart, 2 emulsifiers are added at the critical moment along with a bit of water. This process creates a stable creamy emulsion that keeps the droplets apart, and allows for easy and stable dilution in the spray tank.

These smaller oil droplets assure that only a very thin, even coating of oil will be applied to the plant. Thin and even coverage enables SAF-T-SIDE to be more effective in killing insects as well as being safer for the plant. Remember, the oil droplet is reduced to approximately 1/14th its original size, but without proper emulsification, these oil droplets would coalesce back into larger droplets like conventional products, and be at higher risk for emulsification breaks and phytotoxic results.



Conventional spray oil droplet



SAF-T-SIDE droplet

14 times smaller than conventional spray oil droplet

Benefits of Pre-Emulsification

Mixing

SAF-T-SIDE, already emulsified, dilutes with water easier and more thoroughly than conventional spray oils. Emulsifying with hard water is not a problem for SAF-T-SIDE.

Stability

Even after dilution, SAF-T-SIDE won't separate for many hours in a spray tank. Many conventional oil products begin to break apart into their separate oil and water phases immediately after mixing; SAF-T-SIDE does not. The stable emulsion of SAF-T-SIDE lasts longer than all other oil products ensuring that the spray application is consistent from the beginning of an application to the end.

Reliability

When conventional oil emulsions break apart (shown at right), the oil separates and floats to the surface of the tank. If applied at that point, the solution drawn from the bottom of the tank provides little plant protection, while the remainder may cause phytotoxicity.

Safety

Manufactured using the finest "narrow range" oils and emulsifiers, SAF-T-SIDE doesn't put your crop at risk by using heavy oils known for their phytotoxic risk. The unique formulation of SAF-T-SIDE provides excellent coverage and durability with little risk of phytotoxicity. SAF-T-SIDE applications pose little to no hazard to humans, wildlife or the environment.



Conventional spray oil mixture
Separates and rises to top
in minutes



SAF-T-SIDE
Stays mixed for up to 3 hours

Applications

Range of Applications

SAF-T-SIDE used alone, or in combination with other products is a highly effective control for a broad range of crops and pests. SAF-T-SIDE's mode of action is primarily through the suffocation of eggs, larvae, nymphs and adults of soft bodied insects. SAF-T-SIDE controls a wide range of mite and insect pests in the egg stage such as: spider and eriophyid mites, armored and soft scales, mealy bugs, psyllids, whiteflies, aphids, leafrollers, leaf tiers, webworms, cankerworms, plant bugs, leafhoppers, and adelgids.

Compatibility

SAF-T-SIDE is compatible with most commonly used insecticides and fungicides. Read and follow all precautions and limitations on labeling of all products used in tank mixtures. Do not use in combination with or immediately before or after spraying with fungicides such as Captan, Folpet, Oxythioquinox (Morestan) or any other product containing sulfur. Also do not use with Carbaryl (Sevin™) or Dimethoate (Cygon™). Do not use with any product whose label does not recommend the use of oils. Do not use in combination with NPK foliar fertilizer applications.

Sevin is a trademark of Bayer CropSciences US. Cygon is a trademark of BASF.



- Uniform coverage to smother pests without causing burn or stress to plants
- Effective in high or low pressure applications
- Excellent compatibility with pesticides labeled for use with oil
- Penetrates dense spots in canopy
- Requires much less agitation to maintain homogenous mix



RATE RECOMMENDATIONS

1-2 gallons (3.78-7.56 liters) of SAF-T-SIDE per 100 gallons (378 L) of water. Most mature trees will require 20 gallons (75.6 L) to 500 gallons (1890 L) of spray solution per acre. Row crops generally require 20 gallons (75.6 L) to 100 gallons (378 L) per acre. Apply as needed.

TREE CROPS

Almond, Apricot, Cherry, Plum, Prune, Nectarine, Peach, Pecan
 Aphids, Fruit Tree Leaf Roller, Mites, Scales, Whiteflies
Apple (all varieties)
 Aphids, Apple Red Bug, Fruit Tree Leaf Roller, Mites (including European Red Mite) Scales (hard, soft, scurfy), Whiteflies and other similar insects
Avocado, Banana, Macadamia
 Leafhoppers, Scales, Sigatoka, Leaf Roller, Thrips and other similar insects
Pear (all varieties)
 Aphids, Fruit Tree Leaf Roller, Mites (including Pear Leaf Blister Mite), Pear Psyllia, Scales, Whiteflies
Fig, Olive, Walnut
 Aphids, Mites, Scales and other similar insects

VEGETABLE AND FIELD CROPS

Asparagus, Bean, Cucumber, Eggplant, Melons, Peanut, Pepper, Pumpkin, Radish, Squash, Tomato
 Aphids, Beetle Larvae, Leafhoppers, Leaf Miners, Mites, Thrips, Whiteflies and other similar insects
Cabbage, Cauliflower, Celery, Cole Crops, Lettuce, Onion
 Aphids, Leafhoppers, Leaf Miners, Loopers, Mites, Plant Bugs, Thrips, Whitesflies and other similar insects
Corn (sweet, field, seed), Popcorn, Potato, Sweet Potato, Sugar Beet
 Aphids, Leaf Miners, Mites, Whiteflies and other similar insects
Cotton
 Aphids, Bollworm eggs and larvae, Leafhoppers, Mites, Thrips, Whiteflies and other similar insects
Tobacco
 Leaf Miners, Mites, Whiteflies

SMALL FRUIT

Blueberry, Caneberries, Strawberry
 Aphids, Mites, Sawfly, Scales, Whiteflies and other similar insects
Grapes
 Leaf Hoppers, Leaf Miners, Mealybugs, Mites, Scales, Whiteflies

GREENHOUSE/ORNAMENTALS

Azalea, Camellia, Carnation, Fuschia, Gladiola, Hibiscus, Iris, Lily, Mums, Orchids, Poinsettia, Rhododendron, Rose, Vines
 Aphids, Fungus Gnat, Leaf Miners, Mealy Bugs, Mites, Powdery Mildew, Rust, Scales, Thrips, Whiteflies

SHADE TREES, SHRUBS, ORNAMENTALS,* FLOWERS AND FOLIAGE

Conifers, Foliage and Bedding Plants, Shade Trees, Shrubs
 Aphids, Black Spot, Leaf Miners, Mites, Powdery Mildew, Psyllids, Rust, Sawfly, Scales, Whiteflies

* Oil might remove the glaucous (blue) bloom from such evergreens as Colorado Blue Spruce and Koster Spruce. Use with caution and reduced dosage for summer applications on Japanese Red Maple, Amur Maple and Black Walnut, and for dormant application on Sugar Maple and Redbud.

ACTIVE INGREDIENTS **BY WEIGHT**

Petroleum Oil	80.0%
Other Ingredients	20.0%
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Unsulfonated Residue Petroleum Oil 92% min.	EPA Reg. No. 48813-1

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