



SPORAN® EC² FUNGICIDE

A BROAD SPECTRUM FUNGICIDE FOR USE IN AGRICULTURE, FRUITS, NUTS, VEGETABLES, TURF, ORNAMENTALS, LANDSCAPES, GREENHOUSES, AND NURSERIES

- EMULSIFIABLE CONCENTRATE
- NO REENTRY INTERVAL
- NO PREHARVEST INTERVAL

Active Ingredients:

Rosemary Oil.....	16.00%
Clove Oil.....	10.00%
Thyme Oil.....	10.00%
Peppermint Oil.....	2.00%
Other Ingredients*	62.00%
Total.....	100.00%

*Butyl lactate, polyglyceryl oleate

KEEP OUT OF REACH OF CHILDREN



WARNING

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS:

May cause eye, skin, and respiratory irritation, including drowsiness or dizziness. Wear protective eyewear and gloves when mixing or handling concentrate. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using toilet. Take off contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS

This product poses minimum risk to fish and aquatic organisms. Avoid direct contact with water. This product may be toxic to bees so avoid application when bees are actively foraging.

PHYSICAL OR CHEMICAL HAZARDS

COMBUSTIBLE LIQUID. Keep away from heat/sparks/open flames/hot surfaces. No smoking.

FIRST AID

IF IN EYES: Flush with water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician if irritation persists.

IF ON SKIN: Wash exposed area with plenty of soap and water. Remove contaminated clothing. Get medical attention if irritation or rash occurs.

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

IF SWALLOWED: Rinse mouth out with water. Seek medical attention if feeling sick or nauseous.

Storage and Disposal

Do not contaminate water, feed, or foodstuffs by storage or disposal.

Storage: Store in original container in a well ventilated place.

Keep container tightly closed when not in use. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Keep from freezing.

Container Disposal: Do not reuse empty container.

Rinse empty container then puncture and dispose of container in sanitary landfill, or incinerator. Rinsed containers may be offered for recycling.

This product has not been registered by the US Environmental Protection Agency. KeyPlex represents that this product qualifies for exemption from registration under the Federal Insecticide, Fungicide, and Rodenticide Act.



NET CONTENTS: gallons/ liters

SPORAN® EC² is a broad spectrum, contact fungicide. It controls diseases such as Botrytis Gray Mold (strawberries), Powdery Mildews (grapes, gerbera daisies), Phytophthora Late Blight (tomatoes), etc.

- Disease preventative and curative.
- Prevents fungal attack of plant tissues.
- Prevents and controls black spot on roses, anthracnose, rust and powdery mildew.
- Disrupts the cell wall of spores and hyphae.
- For best results, maintain constant agitation in spray equipment.
- For optimal performance, do not mix with cold water (less than 45° F).
- Do not apply to wilted or otherwise stressed plants, or to newly transplanted materials prior to root establishment.
- Check for leaf and flower burn in small-scale trials before conducting large-scale application of SPORAN® EC².
- When used in conjunction with beneficial insects, it is recommended that a small trial be conducted to assure compatibility before using on a large scale.

DIRECTIONS FOR USE:

Only protected handlers may be in the application area. Do not apply this product in a way that will contact workers or other persons either directly or through drift.

PLANT SAFETY: The use directions of this product are based on the results of product testing programs on a wide variety of ornamental plants. However, it is impossible to test this product on all species and cultivars. The phytotoxicity of SPORAN® EC² has been assessed on a wide variety of common ornamental plants with no phytotoxicity. However, not all plant species and their varieties and cultivars have been tested with SPORAN® EC² applied alone or with a possible tank mix combinations, sequential pesticide treatments, and adjuvants and surfactants. Local conditions also can influence plant tolerance and may not match those under which testing has been conducted. Therefore, before using SPORAN® EC², test the product on a sample of the plant and/or seedling. Do not apply on plants when the temperature is 90° F or above.

THE USE OF ADJUVANT (SPREADERS AND/OR PENETRANTS) IS HIGHLY RECOMMENDED FOR IMPROVING PERFORMANCE

SPORAN® EC can be applied through most standard or field type sprayers after dilution and mixing with water in accordance with label instructions. For best results, spray coverage should be uniform and complete. Always read and follow label directions for adjuvants.

Preharvest Interval: SPORAN® EC² may be applied at any time up to and including the day of harvest.

Use volume of water necessary for uniform and complete spray coverage of foliage.

Use lower rates for light to moderate infestations and higher rates for heavy infestations. Repeat application as required to maintain the desired level of control.

Mixing and Application Instructions

SHAKE WELL BEFORE USING. TO MAINTAIN A HOMOGENEOUS SPRAY MIXTURE, CONSTANT AGITATION OR RECIRCULATION IS REQUIRED.

GENERAL INFORMATION

Apply spray solutions in properly maintained and calibrated equipment capable of delivering the desired volumes. **Always clean tank, pump and lines thoroughly with water after use.**

Mixing

Add SPORAN® EC² to one-half (1/2) tank* under agitation containing water of 45° F or greater before filling to desired level. When combining with other products, such as adjuvants, insecticides, fungicides, or fertilizers, add these products first when the tank is approximately 1/2 full. Ensure that there is good agitation while mixing for complete emulsification. Maintain agitation during spray application.

*In areas with hard water (water with a total hardness of greater than 200 ppm), it is recommended to completely fill tank with water first and then add a water softener, mix thoroughly, add the appropriate quantity of SPORAN® EC², and mix thoroughly. It is critical that the water softener be add to the entire quantity of water and mixed thoroughly before introducing the SPORAN® EC² to achieve maximum emulsion.

Application Equipment and Techniques

Spray droplet size should be adjusted to minimize drift and allow application to the intended exposure area only.

Boom Equipment

For best control using hydraulic or hydraulic air assist equipment, use the recommended rate of this product in sufficient gallons of spray solution per acre as a broadcast spray. Spray should thoroughly wet foliage but not run off.

Hand-held and High Volume Equipment

Spray-to-wet applications of this product may be made with knapsack and backpack sprayers, pump-up pressure sprayers, handguns, hand wands, and other hand-held spray equipment and vehicle mounted high volume spray equipment. For the most efficient use of spray mixture, spray all leaf surfaces uniformly and completely to wetness.

AERIAL APPLICATIONS

- Prior to application, check the aircraft/helicopter spray equipment for uniformity of spray pattern, spray width and output.
- Apply a minimum of 15 gallons per acre of diluted product.
- Optimum results are obtained when plant foliage is not too dense.
- Coverage is essential for good control. Use an output that will ensure optimum product penetration and coverage.
- Make aerial applications when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph.
- Low humidity and high temperature increase the evaporation rate of spray droplets and therefore minimize the likelihood of good coverage.
- Use the largest droplet size consistent with good pest control. Formulation of very small droplets may be minimized by appropriate nozzle selection, by orientating nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy are not recommended.

Questions or Comments: Call 1-800-433-7017 weekdays, 9 a.m. to 4 p.m., EST

Chemical Safety Information: Call 1-800-535-5053 anytime (InfoTrac Chemical Response System)

LIMIT OF WARRANTY AND LIABILITY: KeyPlex warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Complete Directions for Use ("Directions") when used in accordance with those Directions under the conditions described therein. **NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE.** This warranty is also subject to the conditions and limitations stated herein.

Buyer and all users shall promptly notify KeyPlex of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

Buyer and all users are responsible for all loss or damage from use or handling which results from conditions beyond the control of KeyPlex including, but not limited to, incompatibility with other products other than those set forth in Directions, unusual weather, weather conditions which are outside the range considered normal at the application site and for the time periods when the product is applied, as well as weather conditions which are outside the applications ranges set forth in the Directions, application in any manner not explicitly set forth in the Directions, moisture conditions outside the moisture range specified in Directions, or the presence of products other than those set forth in the Directions in or on the soil, crop, or treated vegetation.

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APPLICATION RATES: SPORAN® EC² is an effective fungicide for prevention and control of various fungal diseases. Applications should be made once the disease is observed.

Crops Including but not limited to...	Diseases Including but not limited to...	Application Rate in 100 Gallons per Acre for Ground Applications
Legume and Fruiting Vegetables: Beans, Eggplants, Lentils, Peas, Peanuts, Peppers and Tomatoes	Bacterial Spot, Early Blight, Early Leaf Spot, Gray Mold, Late Blight, Powdery Mildew, Bean Rust, Botrytis Neck, Pin Rot, Rust	1.0 - 3.0 pt
Bulb, Cole and Leafy Vegetables: Broccoli, Cabbage, Cauliflower, Celery, Garlic, Lettuce, Onion and Spinach	Alternaria Leaf Spot, Downy Mildew, Gray Mold, Powdery Mildew, Black Root Rot, Botrytis Neck Rot, Pin Rot, Rust	1.0 - 3.0 pt
Cucurbits: Cantaloupes, Cucumbers, Melons, Squashes and Watermelons	Alternaria Leaf Spot, Downy Mildew, Powdery Mildew	1.0 - 3.0 pt
Root and Tuber Vegetables: Potatoes, Radishes, Sweet Potatoes and Turnips	Bacterial Spot, Early Blight, Early Late Blight, Powdery Mildew, Black Root Rot	1.0 - 2.0 pt
Small Fruits and Berries: Blackberries, Blueberries, Cranberries, Raspberries and Strawberries	Anthrachnose Fruit Rot, Downy Mildew, Gray Mold, Powdery Mildew, Sour Rot	1.0 - 3.0 pt Note: Raspberries do not exceed 3 pts per acre
Grapes and Hops: Grapes (Raisin, Table and Wine)	Powdery Mildew, Downy Mildew, Black Rot, Botrytis Bunch Rot	1.5 - 3.0 pt
Herbs: Anise, Basil, Dill, Mint, Peppermint, Spearmint, Thyme, and Wintergreen	Powdery mildew	1.0 - 2.0 pt
Stone Fruits and Pome Fruits: Apples, Apricots, Cherries, Peaches, Nectarines, Olives, Pears, Plums, Prunes, Pomegranates and Persimmons	Scab, Powdery Mildew, Brown Rot Blossom Blight, Anthracnose, Rust, Gray Mold, Cherry Leaf Spot, Fruit Brown Rot, Black Rot	2.0 - 3.0 pt
Citrus and Sub Tropicals: Avocados, Lemons, Grapefruit, Oranges, Papayas, Bananas, Plantains and Mangos	Alternaria Rot, Botrytis Rot, Greasy Spot, Scab, Brown Rot	2.0 - 3.0 pt
Nuts: Almonds, Cashews, Pecans, Pistachios and Walnuts	Scab, Walnut Blight, Brown Rot Blossom Blight, Anthracnose, Rust	2.0 - 4.0 pt
Field Crops: Corn, Cotton, Sorghum, Soybeans, Sweet Corn and Tobacco	Bacterial Blight, Leaf Spots, Anthracnose, Rust, Powdery Mildew, Downey Mildew, Seedling Blight	1.0 - 3.0 pt
Backyard Fruit and Nut Trees	Powdery Mildew	16 - 48 fl oz Thoroughly wet vegetation.

For aerial applications use a minimum of 15 gallons of spray volume per acre. Complete coverage of foliage is essential to achieve control. The foliage should be completely WET, but avoid runoff. The use of a spreader and/or penetrant adjuvant improves product performance.

LIVERWORT AND MOSS CONTROL

SPORAN® EC² may be applied in nurseries, forestry nurseries, greenhouses, and landscape settings (sidewalks, patios, decks, etc.) to control bryophytes (liverworts, mosses, and hornworts). Apply SPORAN® EC² at 0.8% to 1.6% (1 to 2 fluid ounces per gallon of water, respectively). In nurseries and greenhouses where bryophytes may occur in potted plants, make a directed spray on the bryophytes wetting heavily. Avoid spraying foliage of potted plant. Some nursery plants, such as conifer seedlings, may tolerate a broadcast application but a test area should be evaluated before making large scale applications.

TURF AND LAWNS DISEASE CONTROL

SPORAN® EC² is an effective fungicide for the prevention and control of various fungal diseases including dollar spot and brown patch.

DISEASE	RATE / 5 gal water /1000 sq ft	APPLICATION TIMING / INTERVAL
Fusarium Blight (F. roseum), Red Thread	7-10 fl oz	Begin when grass greens up in spring / 7 to 14 days.
	10-14 fl oz	Use during favorable disease conditions / 7 days.
Dollar Spot (Sclerotinia)	10-14 fl oz	Begin when grass greens up in spring / 7 to 14 days.
	14 fl oz	Use during favorable disease conditions / 7 days.
Leaf Spot (Helminthosporium spp.)	5-7 fl oz	Begin when disease appears.
Rhizoctonia Brown Patch	10-14 fl oz	Use during favorable disease conditions / 3 to 5 days.
Pythium Blight	14 fl oz	Begin at first sign of disease / 5 days or more often during favorable disease conditions
Leaf Rust, Stem Rust, Stripe Rust	5-7 fl oz	Begin when disease first appears / 7 to 10 days

GREENHOUSE, NURSERY AND LANDSCAPE DISEASE CONTROL

SPORAN® EC² is an effective fungicide for the prevention and control of various fungal diseases including anthracnose, rust, scab and black spot on roses.

DISEASE	RATE	APPLICATION TIMING / INTERVAL
Anthrachnose (Colletotrichum spp.)	32-48 fl oz/100 gallon in greenhouses (potted plants, flowering bench crops) and outdoor flowering plants. 64-84 fl oz/100 gallon in outdoor woody plants.	Apply to the point of drip before disease is detected or when conditions are favorable for disease development. Continue at 7-14 day intervals until the threat of disease is over. Under heavy pressure, use the highest rate and the shortest interval. Under light disease pressure, the application may be extended.
Black Spot (Diplocarpon rosae)		
Botrytis (Botrytis spp.)		
Downy Mildew (Peronospora spp.)		
Leaf spot (Septoria spp.)		
Powdery Mildew (Erysiph spp., Microsphaera spp., Oidium spp., Podosphaera spp., Sphaeratheca spp.)		
Rust (Gymnosporangium spp., Phragmidium spp.)		
Scab (Cladosporium spp.)		
Scab (Venturia inaequalis)		
Myrothecium (Myrothecium spp.)		