



EMP BARRIER

Polymer-Based Plant Protection

EMP forms a protective, rather than toxic, physical barrier to pests and pathogens



**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Active Ingredients: Cinnamon Oil.....	1.5%
Other Ingredients: Inerts: (Water, Polyacrylic Acid, Potassium Oleate, Hemp Oil).....	98.5%
Total:	100.00%

*Produced in the USA by GEMM Ag Products, LLC. Patent pending.
P.O. Box 3882, Napa, CA 94558*

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EMP Barrier forms a protective, rather than toxic, physical barrier that protects plants from pests and pathogens. Using organic essential oils and a proprietary hydro-gel polymer technology EMP Barrier controls, smothers and prevents plant fungal pathogens such as: Powdery Mildew, Downy Mildew and Botrytis. EMP Barrier can be used both indoor (nursery or green houses) or outdoors on farms, gardens or landscaping, including but not limited to:

grapes, berries, tomatoes, tree nuts, fruit trees, hops, cannabis/hemp, leafy vegetable greens, ornamentals or other crops needing protection from fungal pathogens.

Mode of action: At a sub-microscopic level, EMP Barrier produces a porous, flexible, polymer hydro-gel barrier with openings in the polymer coating that are 1) sufficient for gas exchange, which fosters unimpaired respiration, hydration, waste removal, and hormone signaling as well as more rapid wound healing, while being too small to allow plant penetration/implantation by fungal pathogens.

Directions for Use: Apply EMP Barrier at any stage of plant growth as a disease preventative before or as an eradicant following fungal infection.

Dilution rates: EMP Barrier is highly concentrated, do not use undiluted. Dilute EMP Barrier into clean water as follows for all crops. Mix well before use.

•**For low disease pressure or as a preventative use a 0.5% or .75% solution depending disease pressure:** Dilute 0.6oz or 1.3oz of EMP concentrate into 1 gallon of clean water (0.5 to 0.75 gallons of EMP into 100 gallons of water).

•**To control the growth and spread of mild to moderate mildew infections use a 1% solution:** Dilute 1.3oz of EMP concentrate into 1 gallon of water (1 gallon of EMP per 100 gallons of water)

•When disease pressure is very high, such as Downy Mildew in green houses: Use a 3% solution. (3.8oz into 1 gallon ; or 3 gallons EMP into 100 gallons water).

Re-application: Interval suggested is 7 to 14 days dependent upon pest pressure and rainfall. Longer intervals may be effective under very low disease pressure conditions. EMP Barrier typically takes 1-3 hours to dry and form a protective polymer barrier. Optimum application temperatures are between 10° and 35° C. (50F-90F) Do not apply when rain or a significant drop in temperature is expected.

EMP Barrier may be safely sprayed up to 24 hours prior to harvest. Re-entry interval (R.E.I.) 4 hours.

EMP Barrier may reduce the impact of smoke taint in wine grapes: Apply EMP Barrier at 1% dilution prior to wildfire smoke exposure. Re-apply at 7 day intervals if no event occurs. See gemmagproducts.com for more information about smoke taint control.

EMP Barrier may reduce frost damage. A 1% dilution offers a few degrees of protection against freezing, particularly under very dry conditions.

Additives and Tank Mixing information: Under some conditions, the use of additives or adjuvants may improve the performance of EMP Barrier. However, all varieties and cultivars have not been tested with possible tank mix combinations. Therefore, before using any tank mix (fungicides, insecticides, herbicides, liquid fertilizers, biological control products, adjuvants, and additives), test the combination on a small portion of the crop to be treated to ensure that a phytotoxic response will not occur as a result of application.

Clean-Up: Thoroughly wash and clean all tools and equipment with mild soap and water. Flush spray equipment immediately after use with water. Dried EMP can be rehydrated with water and washed clean.

Storage and Disposal: Keep container tightly closed. Store in a cool dry area, away from pets and children. Protect product from freezing and high temperatures. Empty containers should be triple rinsed and placed in trash or appropriate recycling receptacle.

Environmental Information: This product is "Generally Recognized as Safe" (GRAS). There are no known hazards to humans, domestic animals, wildlife, or soil. Product is composed of natural oils and polymer hydro-gels that are non-toxic. EMP Barrier breaks down into non-toxic components that are bio-degradable and leave no persistent residues. EMP Barrier should be prevented from entering public or private water supplies (including wells) lakes, streams, or rivers. EMP Barrier is exempted from **EPA registration under FIFRA 25(b).**

Safety: Do not ingest. Avoid contact with skin and eyes. When handling or spraying wear safety glasses, rubber gloves, long sleeve shirt, long pants with shoes and socks. Avoid inhalation of droplets. Wear a simple paper/dust mask while mixing or spraying. In the event of eye contact, flush with water for 5 minutes. Remove contact lens. For skin contact, wash with soap and warm water. Get medical attention if irritation persists. See Safety Data Sheet (SDS) for further safety information.

Limited Warranty Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded. The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of GEMM Ag. Products LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold GEMM Ag. Products, LLC and Seller harmless for any claims relating to such factors.

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