



VAPOR GARD®

ANTI-TRANSPIRANT CONCENTRATE

***ACTIVE INGREDIENT:**

96% di-1-p-Menthene
4% Inert Ingredients

*The amount of active ingredient in the formulation does not determine the activity. Activity is governed by the film which is formed and this is determined by refinement. The active ingredient in this product is Pinolene®, a terpenic polymer. This product is non-ionic.

GENERAL INFORMATION

VAPOR GARD is a water emulsifiable organic concentrate for use on plants to reduce water transpiration. The soft, flexible film formed after the spray application dries, will significantly reduce moisture lost by the plant foliage.

All anti-transpirant spray applications must be applied for full coverage. Spray **VAPOR GARD** for full coverage or use as a dip. No additional spreader is needed with **VAPOR GARD**. Apply **VAPOR GARD** at least one hour, during daylight, before an anticipated rain. Sunlight for this time period, is needed for the protective film to set. **VAPOR GARD** dries on plants to form a clear, glossy film which retards normal moisture loss without interfering with plant growth or normal respiration. **VAPOR GARD** beautifies plants by polishing leaf surfaces.

DIRECTIONS

Can Be Used On All Growing Plants Including: Trees (Deciduous and Conifers); Evergreens; Christmas Trees; Shrubs; Turf; Roses; Flowering Plants; Vegetable, Tobacco and Fruit and Nut Trees. Apply **VAPOR GARD** alone. **CAUTION:** Do Not apply in spray tank combination with any pesticide, on any crop.

EVERGREENS (Winter Protection)—Broadleaf and Needled: such as Azalea, American Holly, Pines, Rhododendron, and Yews: Spray at the rate of 1 part **VAPOR GARD** per 20 parts water to reduce winter damage caused by desiccation. One fall application lasts through the entire winter. The clear, glossy **VAPOR GARD** film will not crack or peel off of the foliage. **VAPOR GARD** does not alter the varietal temperature adaptation of the plant. **VAPOR GARD** will not enable a warm season variety of plant to survive the winter in a cold area. Do Not use for winter protection where temperatures drop below -20°F. (-30°C.). Most winter damage that occurs at temperatures below -20°F. (-30°C.) is due to internal ice crystal formation which causes cell destruction and not from desiccation. Any good anti-transpirant which holds moisture in the plant will increase the problem because extra moisture held within the plant keeps the cell solution too dilute and subject to ice crystal formation under very cold temperatures. Many plant species are affected by this phenomena. Certain plants may demonstrate a high degree of susceptibility at temperatures above those noted. Before using **VAPOR GARD** on large numbers of plants, test it under your conditions on a limited number of plants. Due to varietal and environmental variation, results may differ from year to year.

CAUTION: Do not use this product on any variety of Arborvitae, Cedar, Cypress, Chamaecyparis, Juniper, Sequoia, Dwarf Conifers, or any other similar plant species.

CAUTION: **VAPOR GARD**, as well as other film forming compounds, will turn blue evergreen species, such as Blue Spruce, green on application. The blue appearance will return with a new season's growth.

FOLIAGE PLANTS grown in subtropical conditions such as Florida: To aid in the reduction of cold desiccation damage apply **VAPOR GARD** 2 times at 1% (1 gallon per 100 gallons water) each time. Make the applications about 2 to 4 weeks apart with the first application being made just before the first winter cold front is expected.

EVERGREENS & OTHER PLANTS (TRANSPLANTING and OTHER USES) - Flowers; Turf; Vegetables (such as tomato, pepper, melons, cucurbits, celery, cabbage, lettuce), Tobacco, Coffee and Fruit Transplants; Flowering Plants; Evergreen and Deciduous Trees and Shrubs: Spray or dip plants using **VAPOR GARD** at the rate of 1 part per 40 to 50 parts water before transplanting, to reduce transplanting shock. Use on established plants during growing season to reduce summer scald. Good spray coverage can usually be achieved on low growing plants, such as vegetable transplants, with 50 gallons of spray per acre. Be certain the bottoms as well as tops of leaves are covered by spray. **VAPOR GARD** can be applied to cut Christmas trees to slow the drying process which also reduces the potential fire hazard. **VAPOR GARD** applications can be used to reduce damage from smog, air pollutants or salt mist from wind blown salt water.

CAUTION: For dip applications, maintain agitation by stirring the dip emulsion during the entire dipping period. Do Not dip plant roots.

POME FRUITS (Such as Apples and Pears): To improve size, reduce preharvest fruit drop, reduce sunburn incidence, reduce Stayman cracking, and to improve color in some varieties, apply **VAPOR GARD** at the rate of 1 gallon per acre in enough water for good coverage (100 to 500 gallons per acre). To reduce Golden Delicious Leaf Blotch (Scorch), use **VAPOR GARD**, at rates noted above and in conjunction with applicable fungicide programs, but not in spray tank combination with the fungicide. **VAPOR GARD** reduces this problem through moisture conservation. Make applications before cracking or sunburn conditions occur. For other uses, make application about 4 to 6 weeks before harvest. Do Not apply with any pesticide.

STONE FRUITS (Such as Peaches, Nectarines and Apricots): To improve color, size and flavor, apply **VAPOR GARD** at the rate of 1 gallon per acre, 2 to 3 weeks before harvest. The application should be applied in enough water for good coverage, about 200 gallons per acre. The application may hasten maturity by approximately 1 to 3 days. Do Not use in spray tank combination with any pesticide.

CHERRIES: To improve color, size and to reduce splitting, apply 1 gallon of **VAPOR GARD** per acre in adequate water for coverage, 3 to 4 weeks before harvest. In most cases, 200 gallons of water per acre should be adequate; however, on larger trees more water may be necessary. Flavor may be improved on some sweet cherry varieties. Do Not use in spray tank combination with any pesticide.

GRAPES: To improve size, color, flavor and storage life, through moisture conservation, apply 1 gallon of **VAPOR GARD** per acre in adequate water for coverage, approximately 100 to 200 gallons of water. Applications should be applied just before the bunches close. **CAUTION:** Some adverse color change has been occasionally noted on girdled Thompson Seedless, which could affect fresh market acceptability. Before using wide scale applications, check the application on a few vines under your conditions. Do Not apply with any pesticide.

CITRUS: To improve storage life through moisture conservation, reduce peel desiccation, and increase size, apply 1 gallon of **VAPOR GARD** per acre in adequate water for coverage, approximately 2 to 4 weeks before harvest. The gal-lonage per acre should range between 100 and 600 gallons of water, depending on tree size.

SUBTROPICAL and EXOTIC FRUITS (Such as Avocados, Kiwi, Papaya, Persimmons and others): To improve size and moisture conservation, and to reduce fruit drop, apply **VAPOR GARD** at the rate of 1 gallon per acre in adequate water for full coverage. Due to varietal differences, test **VAPOR GARD** on a few plants before starting large scale usage.

MANGOES: To enhance red fruit coloration and to improve storage and shipping quality, through moisture conserva-tion, apply **VAPOR GARD** at the rate of 1 to 2 gallons per acre, approximately 2 to 4 weeks before harvest. Apply at least 100 to 600 gallons of spray per acre, depending on tree size. Make the **VAPOR GARD** application in adequate water for complete tree coverage.

ASPARAGUS: To reduce moisture loss, apply **VAPOR GARD** at the rate of 1 gallon per acre in enough water for good coverage.

ROOT CROPS (Such as Potatoes and Beets): To improve yield of most varieties, apply **VAPOR GARD** at the rate of 1 gallon per acre in adequate water for coverage, approximately 100 gallons per acre. Timing for this application, on Potatoes, has varied somewhat; however, the most optimum timing is approximately full bloom to 2 weeks after full bloom, or just before the vines drop in the row. Applications made at any time during the bloom period may be helpful. Application on Beets should be made midway in the growing season, usually when 60% or more of the foliage is present. Do Not apply by air as coverage is not adequate enough to show positive results.

VEGETABLE CROPS (Such as Tomatoes, Peppers, Melons and other cucurbits, Beans and others): To help increase fruit size, apply **VAPOR GARD** at the rate of 1 gallon per acre in a full coverage spray. This application should be made early in the fruiting season. Frequently, extra benefits can be obtained, such as improved color on tomatoes and improved flavor in melons. Do Not apply with any pesticide.

ROW CROPS (Such as Cotton): To relieve drought stress or to reduce irrigation, apply **VAPOR GARD** at the rate of 1 gallon per acre in adequate water for good coverage. Apply when 60% or more of the foliage is present.

WATER SAVINGS TOOL (All Crops): To partially relieve drought stress and to reduce irrigation, apply **VAPOR GARD** at the rate of 1 to 2 gallons per acre in adequate water for full coverage. At least 60% or more of the season's foliage should be in place if only one application is to be made. Early season applications are beneficial; however, new growth dilutes the effect of the application, causing the need for additional applications spaced at 4 to 8 week intervals. Due to substantial differences in crops, season and growing areas, local application of this management tool is needed. In general, water needs of the crop can be reduced by 10 to 30 percent with a properly adapted **VAPOR GARD** program.

COLD DESICCATION (All Crops): Plant damage frequently occurs during growing seasons when cold weather fronts pass through crop areas. Damage occurs due to cold desiccation and freezing temperatures. **VAPOR GARD** will reduce the effects of cold desiccation, but will not prevent damage from freezing temperatures. To reduce the effects of cold desiccation, apply **VAPOR GARD** at the rate of 1 to 2 gallons per acre in a full coverage spray, at least a few hours before a cold front arrives, while there is still adequate sunlight to set the film.

MIXING DIRECTIONS: Fill the spray tank half full with water. Add **VAPOR GARD** at the half full point while the tank continues to fill. Maintain continued agitation while the tank is filling. To insure good emulsification of this product, it is advisable to pre-mix **VAPOR GARD** with water before adding to the spray tank.

Rinse tank, lines and nozzles immediately after spraying, with water. After rinsing, there may still be a small amount of sticky residue in the tank. This will help to prevent rusting and corrosion. It will not clog nozzles when sprayer is next used. Do not apply to non-target surfaces. If spray happens to land on undesired surfaces, such as windows, cars, application equipment or others, it can be removed with soap and water, before the spray deposit is dry or with premium grade or white kerosene after the film has dried or set. To remove dried deposits from painted car surfaces, use standard tar remover products designed for use on painted car finishes. Spray that lands on porous surfaces such as wooden surfaces, stone, brick, or other surfaces that cannot be practically cleaned as above, may result in an extended or permanent alteration of appearance. Do not spray plant materials located in a manner that makes it difficult to spray the plant without also spraying the background surface. Apply **VAPOR GARD** only to recommended plant materi-als.

VAPOR GARD will not freeze, foam or clog nozzles.

Use this product in accordance with good agronomic practices, which include utilizing proven spray equipment set for proper coverage. Do not make applications when temperatures are too hot. Applications should be made at tempera-ture levels and when other environmental conditions in your area are such that your experience indicates the applica-tion will be compatible and will accomplish the desired result.

The use of this material being beyond our control and involving elements of risk to human beings, animals and vege-tation, we do not make any warranty, express or implied, as to the effects of such use, when this product is not used in accordance with the directions as stated on this label.

NOT A PESTICIDE. KEEP OUT OF REACH OF CHILDREN

Manufactured By
MILLER CHEMICAL & FERTILIZER CORPORATION
Hanover, Pennsylvania 17331, U.S.A.

5/03M

METRIC CONVERSION

1 Pt. Per Acre = 1.2 Liters Per Hectare 100 Gallons (U.S.) = 378.5 liters
1 Gallon (U.S.) = 9.6 Liters Per Hectare 1 Hectare = 2.5 Acres (U.S.)

EPA Reg. No. - Exempt
EPA Est. No. 72-PA-1

PA Right-to-Know: This product contains proprietary ingredient(s).
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