

# METTLE<sup>®</sup> 125 ME FUNGICIDE

**For control or suppression of diseases on  
Strawberry, Grape, Gooseberry, Fruiting Vegetable Crop Group 8-09 and  
Cucurbit Vegetable Crop Group 9.**

**COMMERCIAL**

MICRO EMULSION

ACTIVE INGREDIENT: Tetraconazole.....125.0 g/L

READ THE LABEL BEFORE USING  
KEEP OUT OF REACH OF CHILDREN

REGISTRATION NUMBER: 30673

PEST CONTROL PRODUCTS ACT

NET CONTENTS: 250 mL – 1000 L

**Gowan Company, L.L.C.  
P.O. Box 5569  
Yuma, AZ 85366-5569  
Product information: 1-800-960-4813**

## PRECAUTIONS

### KEEP OUT OF REACH OF CHILDREN

**DO NOT** apply in greenhouses.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Wear a long-sleeved shirt, long pants, chemical resistant gloves, socks and shoes during mixing and loading, application, clean-up and repair.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### FIRST AID

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

### TOXICOLOGICAL INFORMATION

There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night: 1-800-424-9300

## **ENVIRONMENTAL PRECAUTIONS**

TOXIC to aquatic organisms, non-target terrestrial plants, birds and certain beneficial insects. Minimize spray drift to reduce harmful effects on beneficial insects in habitats next to the application site such as hedgerows and woodland. Observe buffer zones specified under DIRECTIONS FOR USE.

Tetraconazole is persistent and may carryover. It is recommended that any products containing tetraconazole not be used in areas treated with this product during the previous season.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

## **DIRECTIONS FOR USE**

As this product is not registered for the control of pests in aquatic systems, **DO NOT** use to control aquatic pests.

**DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

## **PRODUCT INFORMATION**

METTLE 125 ME FUNGICIDE is formulated as 125.0 grams of active ingredient per litre micro emulsion (ME). The active ingredient in METTLE 125 ME FUNGICIDE is tetraconazole, a triazole fungicide (Group 3) that works by inhibiting demethylation and other processes in sterol biosynthesis. Tetraconazole is a systemic, protectant and curative fungicide and is absorbed quickly into the plant tissue. Optimal disease control is achieved when METTLE 125 ME FUNGICIDE is applied in a regularly scheduled spray program. METTLE 125 ME FUNGICIDE can be applied with a non-ionic surfactant at 0.2 – 0.25% v/v.

## **RAINFASTNESS**

METTLE 125 ME FUNGICIDE is rainfast 2 hours after application.

**Do not** apply if rain is expected within 2 hours of application or disease control may be reduced.

## **COMPATIBILITY OF MIXTURES**

METTLE 125 ME FUNGICIDE is believed to be compatible with most commonly used agricultural fungicides, insecticides, growth regulators, micronutrients and adjuvants. It is always advisable to conduct a spray tank compatibility test before mixing this product with other products. To determine the physical compatibility of METTLE 125 ME FUNGICIDE conduct a simple jar test as follows:

1. Add 500 mL of water to a 1 L jar. The water should be from the same source and temperature which will be used in the spray tank mixing operation.

2. Add 1 mL of METTLE 125 ME FUNGICIDE to the jar; gently mix until product goes into suspension.
3. Add the proportionate amount of the mix product(s), with agitation. Add products in the following order: dry formulations, solutions, suspension concentrates, micro-emulsions, emulsifiable concentrates, and surfactants.
4. Add 1 mL of a non-ionic surfactant (if being used).
5. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
6. An ideal tank-mix combination will be uniform and free of suspended particles. If any of the following conditions are observed the mixture should not be used:
  - a) Layer of oil or globules on the mixture's surface.
  - b) Flocculation: fine particles in suspension or as a layer on the bottom of the jar.
  - c) Clabbering: Thickening texture (coagulated) like gelatin.
7. It is recommended that combinations be used on a small number of plants before treating large areas.

### **SPRAYER PREPARATION**

Before applying METTLE 125 ME FUNGICIDE, start with clean, well maintained application equipment. The spray tank, as well as all hoses and booms, must be cleaned to ensure no residue from the previous spraying operation remains in the sprayer. The spray equipment must be cleaned according to the manufacturer's directions for the last product used before the equipment is used to apply METTLE 125 ME FUNGICIDE. If two or more products were tank mixed prior to METTLE 125 ME FUNGICIDE application, follow the most restrictive cleanup procedure.

Frequently check all application equipment (pressure, nozzles) to ensure complete coverage of the target crop and accurate rate of pesticide application.

### **MIXING INSTRUCTIONS**

1. Fill clean spray tank 1/2 to 2/3 of desired level with clean water.
2. While agitating, slowly add the METTLE 125 ME FUNGICIDE to the spray tank. Agitation should create a rippling or rolling action on the water surface.
3. If tank-mixing METTLE 125 ME FUNGICIDE with other labeled pesticides, add water soluble bags first, followed by dry formulations, solutions, suspension concentrates, micro-emulsions,, emulsifiable concentrates, and then surfactants.
4. Add a non-ionic surfactant (if being used).
5. Fill spray tank to desired level with water. Agitation should continue until all spray solution has been applied.
6. Mix only the amount of spray solution that can be applied the day of mixing. METTLE 125 ME FUNGICIDE should be applied within 24 hours of mixing.

## **SPRAYER CLEAN-UP**

Clean spray equipment each day following a METTLE 125 ME FUNGICIDE application or following a METTLE 125 ME FUNGICIDE application to a new product. After METTLE 125 ME FUNGICIDE is applied; use the following steps to clean the spray equipment:

1. Completely drain the spray tank, rinse the sprayer thoroughly, including the inside and outside of the tank and all in-line screens.
2. Fill the spray tank with clean water and flush all hoses, booms, screens and nozzles.
3. Drain tank completely.
4. Remove all nozzles and screens and rinse them in clean water.

## **GROUND APPLICATION**

Apply product in sufficient water for thorough coverage of foliage, vines and fruit. To obtain adequate coverage of typical agricultural crops, total spray volume usually will range from 200 to 1400 litres per hectare. Increase spray volume as plant growth increases. Spray coverage is affected by nozzle type and spacing, sprayer pressure, litres per hectare, applicator speed, and other factors.

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer rows. **DO NOT** apply when wind speed is greater than 16 km/h at the application site as measured outside of the treatment area on the upwind side.

## **ROTATIONAL CROP RESTRICTIONS**

Do not plant crops within 30 days following the last application of METTLE 125 ME FUNGICIDE. Wheat, barley, crop subgroup 6C (dry pea, dry bean, lentil, chickpea), rapeseed (crop subgroup 20A), fruiting vegetables (crop group 8-09), cucurbit vegetables (crop group 9), corn, grape, gooseberry, strawberry and sugar beet can be planted immediately after the last application.

## **RESTRICTIONS AND LIMITATIONS**

1. **DO NOT APPLY BY AIR.**
2. **Do not** make more than two (2) applications of METTLE 125 ME FUNGICIDE to grapes, gooseberries and fruiting vegetables (crop group 8-09), three (3) applications to cucurbit vegetables (crop group 9) and four (4) applications to strawberries per year.

3. **Chemigation:** Do not apply METTLE 125 ME FUNGICIDE through any type of irrigation system.
4. **DO NOT** enter or allow worker entry into treated areas during the restricted entry intervals (REIs) specified in the following table:

<b>Crop</b>	<b>Postapplication Activities</b>	<b>Restricted Entry Interval</b>
Cucurbit	Hand set irrigation	8 days
	All other activities	12 hours
Fruiting Vegetables	Hand set irrigation	7 days
	Hand harvesting, tying/training	2 days
	All other activities	12 hours
Grape	Girdling and cane turning	23 days
	Tying, training, leaf pulling, hand harvesting, thinning and pruning	15 days
	All other activities	12 hours
Strawberry, Gooseberry	All activities	12 hours

## CROP SPECIFIC USE RATES AND RECOMMENDATIONS

Crop	Disease Controlled	Product Use Rate per Application (mL/ha)	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
Cucurbit	Powdery Mildew ( <i>Podosphaera xanthii</i> )	296-584	3	1752 mL	0 day PHI
Vegetables (Crop Group 9)*	Gummy Stem Blight ( <i>Didymella bryoniae</i> ) (suppression)	584			
<p><b>Use Recommendations:</b> For optimum results, begin application preventatively prior to onset of disease when conditions are favorable and repeat if needed 7 to 10 days after the first application. Under sever disease conditions, higher rate and shorter spray intervals should be used. For Gummy Stem Blight, consult your local university, extension agent, crop consultant or other expert for current recommendations regarding application timing and recommendations. Apply in a minimum of 200 L of water per hectare by ground application. DO NOT apply by air</p>					
Fruiting Vegetables (Crop Group 8-09)*	Powdery Mildew ( <i>Leveillula taurica</i> and <i>Oidium lycopersicum</i> )	296-584	2	1168 mL	2 day PHI
	Septoria Leaf Spot ( <i>Septoria lycopersici</i> ) Early Blight ( <i>Alternaria solani</i> )	440-584			
<p><b>Use Recommendations:</b> For optimum results, begin applications prior to onset of disease development when conditions are favorable and repeat if needed 7 to 10 days after the first application. Do not exceed 21 days between applications. Use the higher rate and shorter interval when disease pressure is high. Apply in a minimum of 200 L of water per hectare by ground application. DO NOT apply by air.</p>					
Gooseberry	Powdery Mildew ( <i>Sphaerotheca macularis</i> )	219 - 365	2	730 mL per hectare	14 days
<p><b>Use Recommendations:</b> Begin application at pre-bloom (30.5 - 45.7 cm shoots) and continue applications using spray intervals up to 21 days in low to moderate disease pressure. Use a 14-day spray interval when disease pressure is severe or conditions are favorable for powdery mildew.</p>					
Grape	Powdery Mildew ( <i>Erysiphe necator</i> )	219 - 365	2	730 mL per hectare	15 days
<p><b>Use Recommendations:</b> Begin application at pre-bloom (30.5 - 45.7 cm shoots) and continue applications using spray intervals up to 21 days in low to moderate disease pressure. Use a 14-day spray interval when disease pressure is severe or conditions are favorable for powdery mildew.</p>					
Grape	Black Rot ( <i>Guignardia bidwellii</i> )	292 - 365	2	730 mL per hectare	15 days
<p><b>Use Recommendations:</b> Begin first application at 2.5 to 7.6 cm of new shoot growth and continue at 14-day intervals. Use higher rate under heavy disease pressure. When heavy disease pressure requires a shorter application interval, use alternate chemistries in between Mettle 125 ME Fungicide applications.</p>					

Strawberry	Powdery Mildew ( <i>Sphaerotheca macularis</i> f. sp. <i>fragariae</i> )	219 - 365	4	1460 mL per hectare	0 days
<p><b>Use Recommendations:</b> Begin application prior to disease development and continue applications using spray intervals up to 21 days in low to moderate disease pressure. Use higher application rates and a 14-day spray interval when growing susceptible varieties and/or when conditions are favorable for heavy disease pressure.</p>					

\* Crop Group 8-09 - Bush tomato (*Solanum centrale*), Currant tomato (*Solanum pimpinellifolium*), Eggplant (*Solanum melongena*), Garden huckleberry (*Solanum scabrum*), Goji berry (*Lycium barbarum*), Groundcherry (*Physalis alkekengi*, *P. grisea*, *P. peruvian*, *P. pubescens*), Martynia (*Proboscidea louisianica*), Okra (*Abelmoschus esculentus*), Pea Eggplant (*Solanum torvum*), Pepino (*Solanum muricatum*), Pepper, bell (*Capsicum annuum*, *Capsicum* spp.), Pepper, nonbell (*Capsicum chinense*, *C. annuum*, *C. frutescens*, *C. baccatum*, *C. pubescens*, *Capsicum* spp.), Scarlet Eggplant (*Solanum aethiopicum*), Sunberry (*Solanum retroflexum*), Tomatillo (*Physalis philadelphica*), Tomato (*Solanum lycopersicon*), Cultivars, varieties and hybrids of these commodities

\* Crop Group 9 - Chayote (fruit) (*Sechium edule*), Chinese waxgourd (Chinese preserving melon) (*Benincasa hispida*), Citron melon (*Citrullus lanatus* var. *citroides*), Cucumber (*Cucumis sativus*), Gherkin (*Cucumis anguria*), Gourd, edible (*Lagenaria* spp.) (includes hyotan, cucuzza), Gourd, edible (*Luffa acutangula*, *L. cylindrica*) (includes hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon and snake melon), Pumpkin (*Cucurbita* spp.), Squash, summer (*Cucurbita pepo* var. *melopepo*) (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini), Squash, winter (*Cucurbita maxima*, *C. moschata*) (includes butternut squash, calabaza, hubbard squash); (*C. mixta*, *C. pepo*) (includes acorn squash, spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*)

## **BUFFER ZONES:**

**DO NOT** apply by air.

### **Buffer zones:**

Spot treatments using hand-held equipment do not require a buffer zone.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands).



Method of application	Crop	Buffer Zones (metres) Required for the Protection of Terrestrial Habitat:
Field sprayer	Fruiting vegetables, cucurbit vegetables, strawberry	1

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Buffer Zone Calculator on the Pest Management Regulatory Agency web site.

### **RESISTANCE MANAGEMENT**

For resistance management, please note that METTLE 125 ME FUNGICIDE contains a Group 3 fungicide. Any fungal population may contain individuals naturally resistant to METTLE 125 ME FUNGICIDE and other Group 3 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

- ✓ Where possible, rotate the use of METTLE 125 ME FUNGICIDE or other Group 3 fungicides with different groups that control the same pathogens.
- ✓ Use tank mixtures with fungicides from a different group that is effective on the target pathogen when such use is permitted.
- ✓ Fungicide use should be based on an integrated disease management program that includes scouting, historical information related to pesticide use and crop rotation and considers host plant resistance, impact of environmental conditions on disease development, disease thresholds, as well as cultural, biological and other chemical control practices.
- ✓ Where possible, make use of predictive disease models to effectively time fungicide applications.
- ✓ Monitor treated fungal populations for resistance development. Notify Gowan Company if reduced sensitivity of the pathogen to METTLE 210 ME FUNGICIDE is suspected.
- ✓
- ✓ If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different target site of action, if available.
- ✓ Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.

✓ For further information and to report suspected resistance, contact Gowan Company at 1-800-960-4318

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**STORAGE**

To prevent contamination store this product away from food or feed.

**DISPOSAL**

**For recyclable containers:**

Do not reuse this container for any purpose. This is a recyclable container and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

**For Returnable Containers:**

Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

**For Returnable-Refillable Containers:**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

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