



GROUP 3 FUNGICIDE

*For control of diseases on Sugar Beets, Strawberries, Grapes and Gooseberries.*

**COMMERCIAL**

MICRO EMULSION

GUARANTEE: Tetraconazole.....125.0 g/L

**READ THE LABEL BEFORE USING**

**KEEP OUT OF REACH OF CHILDREN**

REGISTRATION NUMBER: 30673 PEST CONTROL PRODUCTS ACT

Distributed by:

**Arysta LifeScience North America, LLC**

15401 Weston Parkway, Suite 150

Cary, NC 27513 USA

For product information call, 1-866-761-9397

AD020713 • 103383EN—030413



a product discovered by ISAGRO S.p.A and manufactured  
by ISAGRO USA, Inc. for ARYSTA

**NET CONTENTS: 1 Litre**



Arysta LifeScience

## **PRECAUTIONS**

### **KEEP OUT OF REACH OF CHILDREN**

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco.

### **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.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at: [www.croplife.ca](http://www.croplife.ca).

### **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 HAZARDS**

**TOXIC** to aquatic organisms, non-target terrestrial plants, birds, small wild mammals 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.

## **GENERAL 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.

## **RAINFASTNESS**

METTLE 125 ME FUNGICIDE is rainfast 2 hour 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 1 mL of a non-ionic surfactant (if being used) first, then dry formulations, then flowables, and then emulsifiable concentrates.
4. Place cap on jar, invert 10 times, let stand for 15 minutes, evaluate.
5. 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.
6. 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  $\frac{1}{2}$  to  $\frac{3}{4}$  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, flowables, emulsifiable concentrates, and then solutions.
- 4. Add any required adjuvants.
- 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 METTLE 125 ME FUNGICIDE application. 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 liters per hectare. Increase spray volume as plant growth increases. Spray coverage is affected by nozzle type and spacing, sprayer pressure, liters 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) medium classification. Boom height must be 60 cm or less above the crop or ground.

Airblast (Air Assist) Specific Recommendations for Vineyards: Airblast sprayers deliver the spray mixture into the canopy of vines through a laterally directed airstream. The following drift management practices should be followed when using an Airblast sprayer:

**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.

### **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 and gooseberries, four (4) applications to strawberries and one (1) application to sugar beets per year.
3. There must be a timeframe of at least 14 days between multiple applications of METTLE 125 ME FUNGICIDE.
4. Do not enter or allow worker re-entry into treated areas during the restricted entry interval (REI) of 12 hours unless additional restrictions are listed for specific crops.
5. For sugar beets, do not enter or allow worker re-entry into treated areas for irrigation activities during the restricted entry interval (REI) of 3 days.
6. For grapes, do not enter or allow worker re-entry into treated areas for cane turning and girdling in table grapes during the restricted entry interval (REI) of 23 days. Do not enter or allow worker re-entry into treated areas for hand harvesting, training, thinning, hand pruning, tying, and leaf pulling activities during the REI of 15 days.
7. **Chemigation: Do not** apply METTLE 125 ME FUNGICIDE through any type of irrigation system.

**CROP SPECIFIC USE RATES AND RECOMMENDATIONS**

<b>Crop</b>	<b>Target Diseases</b>	<b>Product Use Rate per Application (mL/ha)</b>
Gooseberry	Powdery Mildew ( <i>Sphaerotheca macularis</i> )	219–365
Grape	Powdery Mildew ( <i>Erysiphe necator</i> )	219–365



<b>Use Recommendations</b>	<b>Maximum Number of Applications per Season</b>	<b>Maximum Product Rate per Season</b>	<b>Minimum Time from Application to Harvest (PHI)</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.	2	730 mL per hectare	14 days
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.	2	730 mL per hectare	15 days

<b>Crop</b>	<b>Target Diseases</b>	<b>Product Use Rate per Application (mL/ha)</b>
Grape	Black Rot ( <i>Guignardia bidwellii</i> )	292–365
Sugar Beets	Cercospora leaf spot ( <i>Cercospora beticola</i> ), Powdery Mildew ( <i>Erysiphe polygoni</i> )	950

<b>Use Recommendations</b>	<b>Maximum Number of Applications per Season</b>	<b>Maximum Product Rate per Season</b>	<b>Minimum Time from Application to Harvest (PHI)</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.	2	730 mL per hectare	15 days
Apply beginning when conditions are favorable for Cercospora leaf spot or powdery mildew. Application of this product must be alternated with a non-triazole fungicide which is registered for use on sugar beets.	1	950 per hectare	14 days

Crop	Target Diseases	Product Use Rate per Application (mL/ha)
Strawberry	Powdery Mildew ( <i>Sphaerotheca macularis</i> f. sp. <i>fragariae</i> )	219–365

**Buffer zones:**

Use of the following spray methods or equipment DO NOT require a buffer zone: hand-held or backpack sprayer and spot treatment.

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).

Use Recommendations	Maximum Number of Applications per Season	Maximum Product Rate per Season	Minimum Time from Application to Harvest (PHI)
<p>Begin application prior to disease development and continue applications using spray intervals up to 21 days in low to moderate disease pressure.</p> <p>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>	4	1460 mL per hectare	0 days

Method of application	Crop	Buffer Zones (metres) Required for the Protection of Terrestrial habitat:
Field sprayer	Strawberry, sugar beet	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.

### **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 when such use is permitted.
- Fungicide use should be based on an IPM program that includes scouting, historical information related to pesticide use and crop rotation and considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for resistance development.
- 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 Isagro USA, Inc. at 919-321-5200.

## **STORAGE**

Keep pesticide in original container. Do not put concentrate or dilute solutions into

food or drink container. Store in cool, dry, and well ventilated place away from seed, feed, fertilizer or other pesticides. Do not store diluted spray.

### **DISPOSAL**

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 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. The user assumes the risk to persons or property that arises from any such use of this product.

Mettle is a trademark of Isagro S.p.A.

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REGISTRATION NUMBER: 30673

PEST CONTROL PRODUCTS ACT

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