



TECHNICAL BULLETIN

METTLE® 125 ME FUNGICIDE

For Control Of Powdery Mildew On Grapes



New METTLE® 125 ME FUNGICIDE

METTLE 125 ME (tetraconazole) from Isagro USA is a broad spectrum fungicide belonging to the Sterol Biosynthesis Inhibitor (SBI) class. With powerful pre- and post-infection activity and low active ingredient content to high performance ratio, METTLE provides outstanding and consistent control of targeted diseases.

Tetraconazole, registered in over 50 countries, is a market leader and is used extensively for disease control in many crops.

ENHANCED SYSTEMIC PROTECTION™ (ESP)

Tetraconazole contains a “tetrafluoroethoxy” group which is unique within the SBI class. The “enhanced systemic protection” found only in METTLE® 125 ME results in improved fungicidal performance compared to other SBI fungicides.

This performance difference is due to the optimization of the following efficacy pathways found in METTLE:

Liposolubility—responsible for penetration through the cuticular waxes of the leaves (translaminar) and translocation through the lipids of the cell membranes within plant tissues.

Hydrosolubility—responsible for translocation through the sap and water conducting tissues.

Vapor action—responsible for distribution inside the plant canopy.

ADVANCED MICRO-EMULSION FORMULATION

METTLE is formulated as a microemulsion (ME) giving it faster penetration and superior coverage characteristics and is rainfast within two hours. This advanced formulation is easy to use and convenient to handle.

METTLE BENEFITS

- Powerful pre- and post-infection activity for more complete disease control
- Proven in more than 50 countries
- Enhanced systemic movement protects new growth and provides longer lasting control
- Advanced formulation provides faster protection and is rainfast within two hours
- Excellent crop safety

METTLE® Fast Facts

EPA Registration Number	80289-8
Maximum Residue Levels (Grape)	MRL's in the EU and Japan. Canada default value of 0.1 ppm.
Restricted Use	No
Posting Required	No
Signal Word	Caution
Restricted Entry Interval	12 hours
NOI Required	No
Closed System	No
Rotational Crop Restrictions	Do not plant crops other than grapes within 15 days following the last application of METTLE.
Pre-Harvest Interval	14 days
Use Rates	3–5 ounces per acre (depending on disease pressure, interval and/or tank mix partner)
Modes of Action	Group 3. METTLE inhibits the formation of fungal cell membranes.
PPE	Long sleeved shirt and long pants, chemical resistant gloves, shoes plus socks.

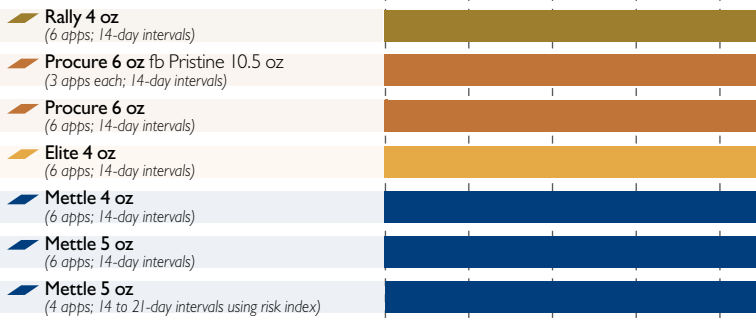
GRAPE POWDERY MILDEW (% Control)

55 60 65 70 75 80 85 90 95 100

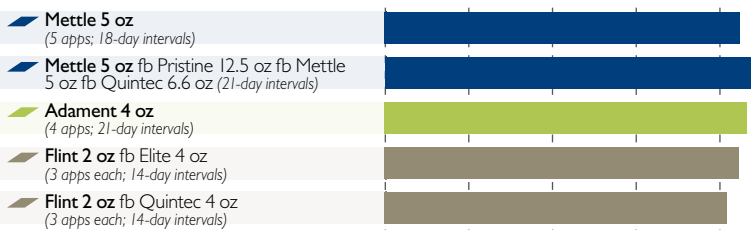
20 CLUSTER SAMPLE Untreated Check = 99% Severity D. Gubler – 2006



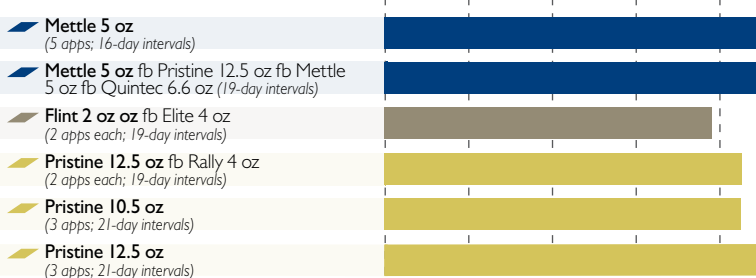
15 CLUSTER SAMPLE Untreated Check = 75% Severity D. Gubler – 2007



15 CLUSTER SAMPLE Untreated Check = 59% Severity D. Gubler – 2008



15 CLUSTER SAMPLE Untreated Check = 60% Severity G. Leavitt – 2008



2006–2008 SUMMARY Untreated Check = 73% Severity



PRODUCT USE INFORMATION

Please consult the product label for specific use directions and details.

Grapes

Powdery Mildew (*Uncinula necator*)
Black Rot (*Guignardia bidwellii*)

Suppression (only when using highest label rate)
Botrytis Bunch Rot (*Botrytis cinerea*)

APPLICATION TIPS

- METTLE is compatible with most insecticides, fungicides and foliar nutrients.
- Thorough coverage of plant foliage is necessary for optimal disease control. Sufficient water volume and uniform coverage are recommended for best results.
- For ground applications, apply in sufficient water for thorough coverage; for aerial applications, use a minimum of 10 gal/A.
- Avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur.
- Do not exceed the nozzle manufacturer's recommended pressure.

PEST MANAGEMENT STRATEGIES

IPM

Integrate METTLE into a comprehensive disease and pest management program. Follow cultural practices known to reduce disease development. Consult your local extension specialist, pest control adviser and/or Isagro representative for additional IPM strategies established for your area. Use METTLE in Agricultural Extension advisory (disease forecasting) programs, which recommend application timing based on environmental factors favorable for disease development.

Tank Mixtures

METTLE may be used in tank mixtures with fungicides having a different mode of action (MOA) which are registered for the same use and are effective against the target pathogen. Tank mixing METTLE with other Group 3 fungicides is not recommended.

For more information on METTLE and details on how it fits into your spray program, please contact your crop protection supplier.

IMPORTANT: This bulletin is not intended to provide adequate information for use of this product. Before using this product, read and carefully observe all precautionary statement, instructions for use, restrictions, storage and disposal statements and other pertinent information on the label.

Mettle is not registered for sale or use in all states.

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Always read and follow label directions.