



## TECHNICAL DATA BULLETIN

### PRODUCT TECHNICAL INFORMATION AND APPLICATIONS

**RIDOXYL<sup>®</sup> 240EC**

(Metalaxyl-M 240 g/L)

FRAC 4; phenylamide: acylalanine

#### 1. INTRODUCTION:

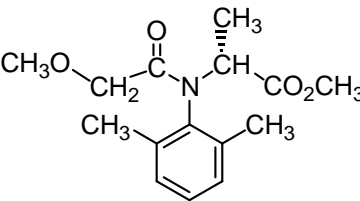
*Ridoxyl 240EC* is a systemic fungicide with protective and curative action, to control diseases caused by air- and soil-borne Peronosporales. It contains 240 g / L of the active ingredient Metalaxyl-M along with other necessary formulants as an emulsifiable concentrate formulation. Soil applications of *Ridoxyl 240EC* are used to control soil-borne pathogens causing root and lower stem rots on citrus and stone fruits, *Phytophthora*, and *Pythium* spp. on many different crops, including vegetables and ornamentals. Seed treatments control systemic Peronosporaceae on maize, peas, sorghum and sunflowers, as well as damping-off (*Pythium* spp.) of various crops. Foliar sprays are recommended only with mixtures of Metalaxyl-M and protectant fungicides to control air-borne diseases caused by *Pseudoperonospora*, *Phytophthora*, *Peronospora*, *Plasmopara*, downy mildews, and *Bremia lactucae* on vegetables and other crops.

#### 2. PHYSIOCHEMICAL PROPERTIES:

Assay:	"Metalxyl-M" 240 ± 12 g/L
Appearance:	Amber to Yellow Liquid
Odour:	Sweet wax
Density	1.017 ± 0.038 Kg / Liter
Flash Point	> 40 °C
pH:	4 - 6 (1% solution in H <sub>2</sub> O @ 25°C)
Water content:	> 3.0 g / Kg



### 3. ACTIVE INGREDIENT:

<b>Common Name</b>	<b><i>Metalaxyl-M</i></b>
Chemical Group	<b>FRAC 4</b> ; phenylamide: acylalanine
CAS Registry No.	70630-17-0
Molecular Formula	C <sub>15</sub> H <sub>21</sub> NO <sub>4</sub>
Chemical Name (IUPAC)	methyl <i>N</i> -(methoxyacetyl)- <i>N</i> -(2,6-xyllyl)- <i>D</i> -alaninate; methyl ( <i>R</i> )-2-[[[2,6-dimethylphenyl)methoxyacetyl]amino}propionate
Structural Formula	
Molecular weight	279.3
Vapour Pressure	3.3 mPa (25 °C)
K <sub>ow</sub> log P	1.71 (25 °C)
Acute oral LD <sub>50</sub> , Male Rat	667 mg/kg

### 4. MODE OF ACTION:

**Ridoxyl**<sup>®</sup> 240EC is systemic fungicide with protective and curative action, absorbed through the leaves, stems, and roots. Inhibits protein synthesis in fungi, by interference with the synthesis of ribosomal RNA. The (*R*)- (metalaxyl-M) and (*S*)- isomers have the same mode of action, but differ considerably in effectiveness.



## 5. USES:

**Ridoxyl® 240EC** is used to control diseases caused by air- and soil-borne Peronosporales on a wide range of temperate, subtropical and tropical crops.

**Foliar sprays** with mixtures of Metalaxyl-M and protectant fungicides are recommended to control air-borne diseases caused by:

*Pseudoperonospora humuli* on hops,

*Phytophthora infestans* on potatoes and tomatoes,

*Peronospora tabacina* on tobacco,

*Plasmopara viticola* on vines,

downy mildews of vegetables, and

*Bremia lactucae* on lettuce,

**Soil applications** of Metalaxyl-M alone are used to control soil-borne pathogens causing

root and lower stem rots on avocado and citrus,

*Phytophthora nicotianae* on tobacco,

*Phytophthora* spp. on peppers, and

*Pythium* spp. on many different crops, including ornamentals,

**Seed treatments** control

systemic Peronosporaceae on maize, peas, sorghum and sunflowers, as well as

damping-off (*Pythium* spp.) of various crops.



## 6. APPLICATIONS:

### Recommendations for use

Crop	Disease	Application rate	PHI
<b>Cucurbits:</b> Cucumber, Squash, Melon and Watermelon	Damping-off caused by <i>Pythium</i> spp.	2-4 liters /ha or 5-9 ml / 100 longitudinal meters before transplanting or directly after sowing.	
Tomato, Peppers and Eggplant	Root rot caused by <i>Phytophthora</i> spp. and Damping-off ( <i>Pythium</i> spp.)	2-4 liters /ha before transplanting.	To be used at planting only.
Potatoes	Tuber rot ( <i>Pythium</i> spp.) and pink rot <i>Phytophthora</i> spp.	4 liters / ha before burring tubers in the ground (30 Liters solution / ha min.)	
Carrot	Root rot ( <i>Pythium</i> spp.)	2.5 Liters / ha through irrigation at planting.	
Alfalfa	Damping-off caused by <i>Pythium</i> spp	1-2 Liters /ha through central pivots.	
Citrus	Root rot ( <i>Phytophthora</i> spp.)	1 ml / m <sup>2</sup> for small seedlings at nursery 2 ml / m <sup>2</sup> for small trees (1-3 years old )	21 days for fruiting trees
	Trunk rot and gummosis ( <i>Phytophthora</i> spp.)	5 ml / m <sup>2</sup> for large trees to be added with irrigation water.	
Apples	Nick and root rot ( <i>Phytophthora</i> spp.)	2-4 ml / tree to be added through irrigation twice / season.	30 days
Stone fruits	Root rot ( <i>Phytophthora</i> spp. & <i>Pythium</i> spp.)	1 ml / m <sup>2</sup> at the nursery 2 ml / m <sup>2</sup> for trees 1 - 3 years old 5 ml / m <sup>2</sup> for large trees.	
Strawberry	Red heart and Root rot caused by <i>Phytophthora</i> spp.	1-2 Liters / ha before planting	10 days
Ornamentals	Damping-off caused by <i>Pythium</i> spp. and stem and root rots ( <i>Phytophthora</i> spp.)	30-50 ml / 100 m <sup>2</sup> for leafy plants (once every three months). 40 - 80 ml / 100 m <sup>2</sup> for cut flowers (once every 6 weeks) 80-120 ml / 100 m <sup>2</sup> for woody plants (once every 10 weeks).	-



## 7. PRE-HARVEST INTERVALS:

For most crops: Do not harvest for 2 weeks after application

## 8. COMPATIBILITY

**Ridoxyl**<sup>®</sup> 240EC is compatible with the herbicides commonly used in Asparagus and can be applied with conventional ground and aerial spraying equipment.

## 9. HANDLING, STORAGE AND TRANSPORTATION

**Ridoxyl**<sup>®</sup> 240EC should be transported its original labeled, tightly closed container. Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.