



Biological Data Sheets
Kenopel-BIO–April 2007

KENOPEL® (Guazatine)

Biological activity

Kenopel® is a guanidine contact fungicide with a broad spectrum activity for the control of fungal diseases. It is used as seed dressing agent in cereals and as post-harvest treatment in citrus and tomatoes, and also in timber preservation.

Kenopel® is active against *Drechslera*, *Fusarium*, *Septoria* and *Tilletia* in wheat, barley, rye and oats. It is active also against post-harvest diseases in citrus such as *Geotrichum* and *Penicilium* and in tomatoes against *Alternaria*, *Botrytis*, *Geotrichum* and *Rhizopus*.

Mode of Action

Kenopel® disturbs the membrane function of fungi. It has a general effect on many metabolic functions such as oxidation, phosphorylation, the citric acid cycle and mitochondrial ATP exchange.

The main feature of the mechanism of Kenopel® action appears to be an alteration of the charge distribution of the fungal membrane and its subsequent effect on cellular permeability. Kenopel® is an oligo-site inhibitor and the risk of resistance is very low.

Residues

As Kenopel® is non-systemic fungicide, its use as a seed-dressing does not result in any detectable (<0.05 ppm) residue in the grain.

Formulations Available

Kenopel® is available in various formulations and mixtures:

Kenopel 70% Tech	=	700 g/kg Guazatine
Kenopel 30	=	300 g/lit Guazatine
Kenopel 35	=	350 g/lit Guazatine
Kenopel 400	=	150 g/lit Guazatine
Kenopel 400 Plus	=	150 g/lit Guazatine + 10 g/lit Imazalil
Kenopel Agua	=	25 g/lit Guazatine + 25 g/lit Imazalil
Kenopel 300025	=	300 g/lit Guazatine + 25 g/lit Imazalil
Kenopel 300020	=	300 g/lit Guazatine + 20 g/lit Imazalil



Diseases controlled by Kenopel[®] (seed treatments)

Crop	Latin name
Wheat	<i>Drechslera sativa</i>
	<i>Fusarium nivale</i>
	<i>Fusarium culmorum</i>
	<i>Fusarium gramineum</i>
	<i>Septoria nodorum</i>
	<i>Tilletia caries</i>
Barley	<i>Drechslera sativa</i>
	<i>Fusarium spp</i>
Rye	<i>Fusarium spp</i>
Oat	<i>Fusarium spp</i>

Diseases controlled by Kenopel[®] (post-harvest treatment)

Crop	Latin name
Citrus	<i>Geotrichum candidum</i>
	<i>Penicillium digitatum</i>
	<i>Penicillium italicum</i>
Tomatoes	<i>Alternaria alternata</i>
	<i>Botrytis cinerea</i>
	<i>Geotrichum candidum</i>
	<i>Rhizopus stolonifer</i>
Timber preservation	<i>Penicillium spp</i>

Rates and number of Applications in seed treatment

45-80 g a.i/100 Kg seeds

Phytotoxicity

Not phytotoxic to the above mentioned crops, if used according to recommendations.

Guazatine

Guazatine is a quanidine contact fungicide with broad spectrum activity for the control of fungal diseases.

Biological efficacy of Guazatine for seed treatment

Barley

Brown Fot Rot
Snow Mould
Leaf Stripe
Net Blotch

Fungal disease

Fusarium spp.
Microdochium nivale
Pyrenophora graminea
Pyrenophora teres

Activity Rate

++(+)
+++
+(+)
+

Oats

Fusarium Blight
Leaf Blotch

Fusarium spp
Pyrenophora avenae

++(+)
+(+)

Rye

Fusarium Blight
Snow Mould

Fusarium spp.
Microdochium nivale

++(+)
+++

Wheat

Blue Mould
Bunt
Stinking Smut
Snow Mould
Seedling Blight
Seedling Blight
Seedling Blight
Seedling Blight
Glume Blotch

Penicillium spp.
Tilletia carie
Tilletia foetida
Microdochium nivale
Fusarium graminearum
Fusarium culmorum
Fusarium nivale
Fusarium roseum
Septoria nodorum

+
++(+)
++(+)
+++
++(+)
++(+)
++(+)
++(+)
++

Rates of activity

+ moderate ++ good +++ excellent

STOP!

**All pesticides can be harmful to health and the environment if misused.
Read the label carefully and use only as directed.**