

# Valbon

Reg. Nr. / No. L7681 Wet Nr. / Act No. 36 van / of 1947

A water dispersible granule translaminar systemic and contact fungicide for the preventive control of late blight in potatoes and downy mildew in wine and table grapes.



**LABEL  
EXPANSION**

Crop	Disease	Application rate	Comments
Grapes (wine and table)	Downy mildew ( <i>Plasmopara viticola</i> )	180g-200g per 100 l water	<p>Commence with applications at 10cm shoot length in a preventative programme with 10-14 days intervals against downy mildew.</p> <p>Use 180 g – 200 g VALBON<sup>®</sup> WG per 100 l water for high volume spraying and complete coverage without run off. Use the higher dosage and shorter interval during the period of rapid growth of the vine early in the season, under higher disease pressure or when abnormally heavy rain down pours have occurred shortly after previous spray.</p> <p>Do not apply more than 4 Valbon sprays per season. Alternate with other registered chemically unrelated downy mildew fungicides. Observe the pre harvest interval.</p>



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# Valbon enables grapes to bid downy mildew bon voyage

Grapes in monoculture, as with any other crop, are susceptible to numerous plagues which include both microbes and insects. For a disease to develop, three factors have to be present. These are: A susceptible host, a virulent pathogen and suitable climatic conditions for disease development. These three factors are often referred to as the "disease triangle".

Downy mildew of grapes caused by *Plasmopara viticola*, a pathogen belonging to the group of fungi called oomycetes, is extremely destructive to grapevines if left unchecked, and can cause very severe yield losses.

The fungus survives in the form of spores which can remain viable for three to five years on old plant material in the vineyard. When conditions become favourable for the fungus to grow, the spores germinate and infection occurs. The conditions best suited for primary infection of the fungus are at least 10 mm rain and a prevailing temperature of not less than 10°C for 24 hours. As with all oomycete fungi, motile zoospores are released, which move in free water and these infect through the stomata. Symptoms appear as yellow oily spots, 5 to 15 days later on leaves (figure 1) or berries (figure 2). Following a warm, wet night, these yellow spots will sporulate, showing a white downy fungus growth on the back of leaves (figure 3).

Valbon is a new fungicide from Plaaskem which contains benthialavali-carb-isopropyl (17,5 g/kg) and mancozeb (700 g/kg) as a water dispersable granule.

Benthialavali-carb has four different sites of action against oomycetes. It suppresses fungal sporulation (anti-sporulating effect), germination and release of spores and mycelial growth is strongly inhibited.

Mancozeb, on the other hand, belongs to the EBDC (ethylene-bisdithiocarbamates) group fungicides. This group of preventative fungicides has a very wide range of activity and a multisite action. No resistance to this active has ever been reported. This active is included in the Valbon formulation as an anti-resistance strategy. However, to get the full benefit of the two active ingredients, Valbon should be applied preventatively.

Benthialavali-carb-isopropyl is translaminar systemic, which means that the active ingredient moves through the leaf, where it inhibits fungal growth and sporulation. This is important for the control of downy mildew, since the fungus grows inside the leaf and sporulation of the fungus occurs on the abaxial or underside of the leaf surface (figure 3).

Valbon is recommended for preventative control of downy mildew on grapevines at a rate of 180 g/100 l to 200 g/100 l, with application commencing at 10 cm shoot length. Application should be repeated every 10 to 14 days with a maximum of four applications per season. However, since newly formed vine leaves will not be protected, it is important to adjust spray intervals according to new growth and infection periods. Valbon should not be applied closer than 28 days to harvest on wine grapes. On table grapes exported to Europe, appli-



cation should be made only before flowering. Registration trials for Valbon on grapevines showed remarkable results and symptoms of disease were prevented in the trials under very high infection pressure.



Figure 1. Downy mildew symptoms on grapevine leaves.



Figure 2. Downy mildew symptoms on grape berries.



Figure 3. Sporulation of downy mildew on the abaxial surface of a grapevine leaf.