



A protectant fungicide for the control of mildew and rusts on a range of horticultural crops

SULPHUR AS A FUNGICIDE

General Information

Hortcare® Sulphur 800 DF is a wettable sulphur formulation designed for maximum fungicidal effect and ease of handling. Sulphur is present in a range of fine particle sizes that provide good plant coverage, rapid action and persistence. The micro-granular formulation flows readily without forming dust and dissolves rapidly in water to form an easily maintained suspension.

Hortcare® Sulphur 800 DF is also active against some mite species, notably Erineum mite on grapevines.

Mode of Action

Hortcare® Sulphur 800 DF is a preventative fungicide with contact and fumigant activity. Actual contact of the sulphur particle with the fungus is necessary before fungicidal action can occur.

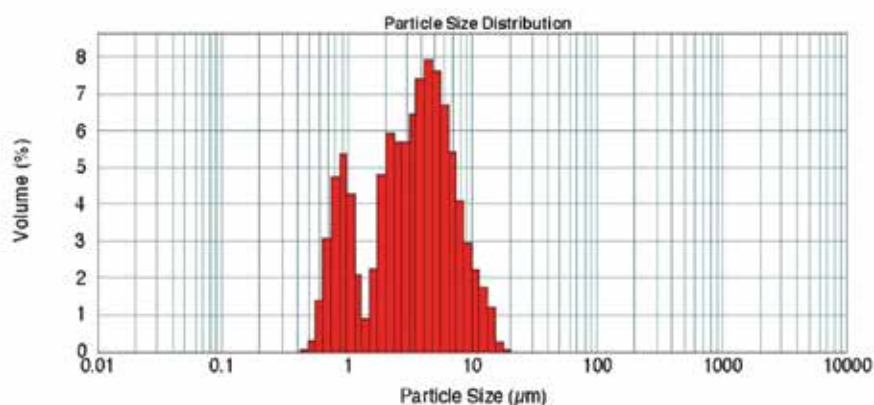
Resistance management is a key to disease management. Sulphur belongs to Group Y Fungicides, and has Multi-site Activity. It interferes with several of the (fungus) vital life functions. For this reason resistance is less likely to develop. Group C for example has single site activity and for this reason resistance can develop readily.

The importance of particle size in the case of sulphur products

- Too small... Small particles have a large surface area and are therefore more volatile and result in quick vapour release which has an immediate effect. Particles below 0.5 micron are extremely volatile and are the main culprits of sulphur burn. These small particles can also enter the stomata, which can then lead to more crop damage.
- Too big... Large particles are less volatile and release more slowly, therefore making them more effective over a longer period. Particles above 100 micron are undesirable and can lead to blockages of the spray equipment.

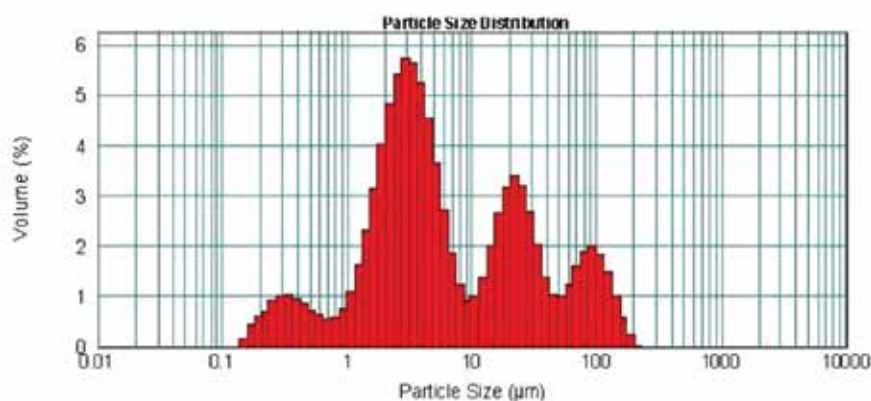


The particle size analysis differs from brand to brand as can be seen in the tables below:

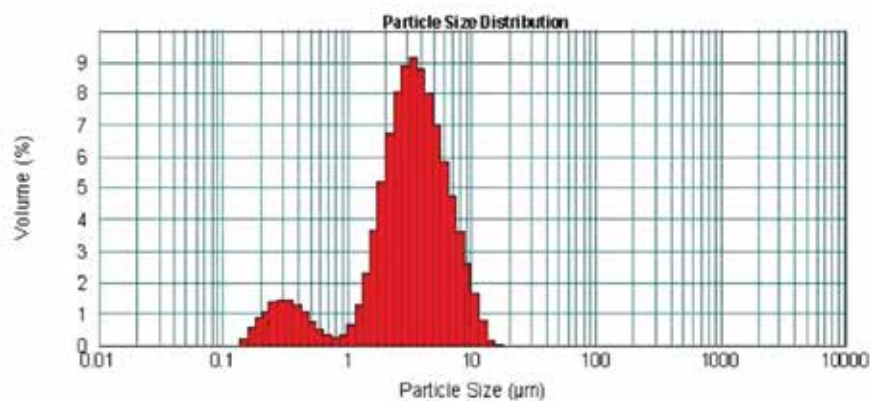


Hortcare® Sulphur 800 DF

The particle size range of **Hortcare Sulphur 800 DF** is ideal in that there are minimal 'fines', i.e. those particles below 0.5 microns and also there are no particles large enough to block jets.



Product B



Product C



Hortcare® Sulphur 800 DF

Particle Size Distribution:

PERSISTANT PHASE

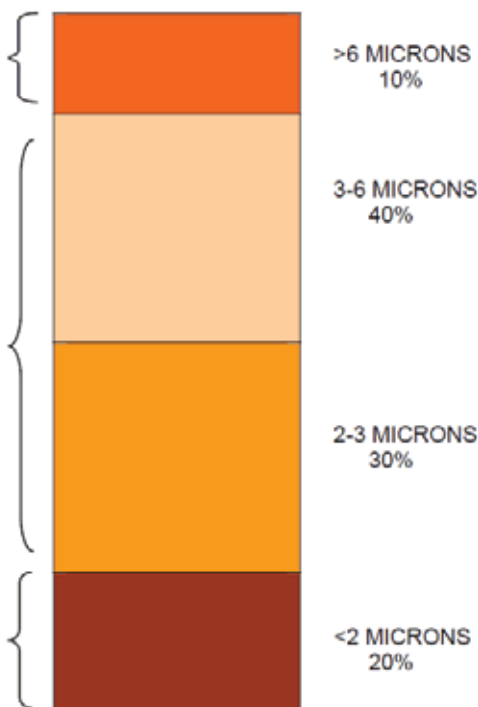
The smaller proportion of larger particles provide a long-lasting preventative effect

PROTECTANT PHASE

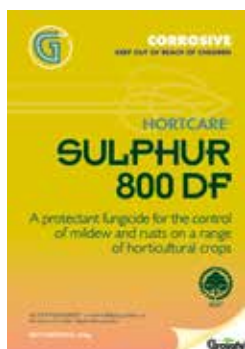
The optimum particle size ensures maximum effectiveness and at the same time ease of application.

VAPOUR PHASE

The fine particles are extremely effective on contact and result in rapid action.



The micro-granular formulation flows readily without forming dust and dissolves rapidly in water to form an easily maintained suspension.



Hortcare® Sulphur 800 DF

Formulation: water dispersible granules (WDG)

Packaging: 15 kg

Contains: 800g/kg Sulphur (S)

Properties and mode of action



Hortcare Sulphur 800 DF is a contact fungicide for the control of powdery mildew on apples, grapes, ornamentals, peas, vegetables, nectarines, peaches, plums and tamarillos. **Hortcare Sulphur 800 DF** creates a plant protective coating on the surface of the plant that prevents the germination of spores of certain plant diseases. As **Hortcare Sulphur 800 DF** is a contact fungicide, application should be made prior to infection.

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Directions for Use

Hortcare Sulphur 800 DF is a preventive fungicide for the control of following plant diseases:

Crop	Disease	Product per 100L of water	Application time / comments
Apples	Powdery mildew	100 - 200g	Apply from bud movement every 10–14 days until harvest. To avoid sulphur shock do not apply post blossom unless a pre-blossom spray has been applied.
Grapes	Powdery mildew Erineum mite	150 - 300g	Apply every 10–14 days from bud swell until six weeks before harvest.
Ornamentals	Powdery mildew Rust	100 - 200g	Apply every 10–14 days while disease threatens.
Peas	Powdery mildew	100 - 200g	Apply when disease threatens. Use the higher rate if infection is noticed.
Vegetables	Powdery mildew	100 - 200g	Apply every 10–14 days while disease threatens. Use the higher rate if infection is noticed. Check Crop Safety Statement above.
Nectarines, Peaches, Plums	Rust	100 - 200g	Apply at fruit set and repeat every three weeks until harvest.
Tamarillos	Powdery mildew	100 - 200g	Apply every 10–14 days in the growing season. Use the higher rate if infection is noticed.

Phytotoxicity:

When used in accordance with the instructions for use and at temperatures below 25°C **Hortcare Sulphur 800 DF** not phytotoxic.

Management Considerations

Application method:

Hortcare Sulphur 800 DF is a protectant fungicide. Good cover is needed for optimum performance. Use high volume spray equipment and ensure complete coverage of the target crop. For concentrate spraying adjust dilution rate accordingly.

Mixing:

Pour the measured quantity into the partly filled spray tank, commence agitation and then add the remaining water. Maintain agitation before and during spraying.

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Compatibility:

Hortcare Sulphur 800 DF is compatible with many other spray chemicals. Check with a compatibility chart or your Grosafe Representative. If in doubt test small quantities first. **Hortcare Sulphur 800 DF** is incompatible with Captan, spray oils/mineral oils, Decis, Metasystox and formulations of chlorpyrifos.

Crop Safety:

Some fruits and plants can be sensitive to sulphur under certain conditions. If in doubt spray a few plants to confirm that no sensitivity occurs. Certain varieties of apples are 'Sulphur Shy' including Cox's Orange, Red Delicious and Kidd's Orange. Do not use on these varieties, or others known to be sensitive in the same programme as Captan, or within 21 days of applying a spray oil. Note that sulphur can affect the fruit-finish on some apple varieties. Do not use on apricots, pears, cucumbers or rock melons. Damage can occur to other cucurbits under glass, and to other glasshouse crops, if treated during periods of rapid growth. Avoid spraying in strong sunlight, very high humidity or when the temperature is above 25°C. Rainfall within three hours of application may reduce efficacy.

Withholding period: No limit.

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