



A Fungicide for the Control of Botrytis and Powdery Mildew on Grapes An Adjuvant to improve coverage of fungicides on Grapes

ACTIVE INGREDIENTS: contains 157 g/litre fatty acids (potassium salts) and 254 g/litre potassium bicarbonate in the form of a soluble concentrate

Registered pursuant to the ACVM Act 1997, No P8633.

Approved pursuant to the HSNO Act 1996, Approval Code HSR 101043

See www.foodsafety.govt.nz for registration conditions.

See www.epa.govt.nz for approval controls

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LHML32/3

NET CONTENTS 20 litres when packed

LOW TOXICITY
Harmful – May cause eye irritation. Avoid contact with the eyes.
Designed for biocidal action against fungous diseases. Avoid contamination of any water supply with chemical or empty packaging.

PRECAUTIONS
Keep out of the reach of children.
Avoid eye and skin contact and inhalation of dust and spray mist.
Wear gloves and goggles while mixing and spraying. Do not eat, drink or smoke while using.
Remove protective clothing and wash hands and exposed skin before meals and after work. Wash protective clothing daily after work.
Storage & Disposal: Store in original packaging, tightly closed, in a cool dry, well ventilated place. Triple rinse used container, recycle or dispose in an approved landfill.

FIRST AID
If swallowed, do not induce vomiting. For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor if feeling unwell.
If splashed in the eyes, flush with plenty of water for at least 15 minutes. If contact with skin and hair wash with plenty of soap and water.

DIRECTIONS FOR USE
It is an offence to use this product on animals.

CONTROL OF BOTRYTIS AND POWDERY MILDEW ON GRAPES
HML32 has proven efficacy against botrytis and powdery mildew. Powdery mildew is a known pre-cursor to poor botrytis control. In all situations where HML32 is used for preventive control of powdery mildew, include wettable sulphur from bud burst to veraison. Where there is a history of powdery mildew, it is also recommended to include either HML Silco (potassium silicate) or copper to assist in eradicating any emerging infection. Where HML32 is used specifically for eradication of powdery mildew infections, either (i) include copper at a rate of at least 45gm metallic copper/100L and potassium bicarbonate at a rate of 300gm/100L or (ii) include HML Silco and wettable sulphur at label rates.

HML32 will improve the efficacy of wettable sulphur for erinose mite control.

APPLICATION
For cover sprays used for prevention of botrytis and powdery mildew, apply HML32 with sufficient water to obtain full coverage of bunches and leaf canopy. When applied solely for botrytis control, target the bunch zone. Alternating the application direction assists with better coverage.
For sprays used either for eradication of powdery mildew or maturity enhancement in the bunch zone, target that area alone. Important, application is different to preventive sprays – see notes on website.

HML32's mode of action is contact therefore efficacy will be optimised by viticultural practices that assist spray coverage such as well calibrated sprayers, sprayer speeds and adequate bunch exposure.

Warning: As with many products, avoid spraying foliage if the vines are severely water stressed.
Higher water rates will give better coverage and better disease control. Concentrate spraying is not recommended.

MIXING INSTRUCTIONS
HML32 will dissolve easily. Three quarters fill the spray tank, with agitators running. Slurry mix HML32 in its pail, and add through top filter basket or venturi, after other pesticides have been added (see compatibility below), and then continue to fill with water. Do not leave standing without agitation for long periods.

Disease	Rate	Time of application	Comment
Powdery Mildew Prevention Botrytis Prevention	1.25L HML32 per 100L In all cases for powdery mildew prevention: Apply with wettable sulphur at label rates	From budburst (E-L 4) to the onset of flowering (E-L 19), apply HML32 at 10-14 day intervals From the onset of flowering (E-L 19) until one month after fruitset (E-L 27) apply, HML32 at 7 – 10 day intervals. From one month after fruitset (E-L 27) to veraison (E-L35) apply, HML32 at 10 - 14 day intervals.	Apply to the point of runoff (At least 12l/100m row at full canopy) Where a major rain event occurs during a period of growth replace the cover as soon as practicable. Alternating the direction of applications assists with better coverage. Where there is a history of powdery mildew, it is also recommended to include copper fungicide (45g metallic copper per 100L) or HML Silco (see label for rate). For control of botrytis flowering infection, ensure an application is made at onset of flowering (E-L 19) and 80% capfall (E-L 25) Growers should check with their winery regarding the use of Sulphur close to veraison.
Powdery Mildew Eradication	1.25L HML32 per 100L Apply with potassium bicarbonate (300g/100L and copper fungicide (45g metallic copper per 100L) OR 1.25L HML32 per 100L Apply with wettable sulphur and HML Silco at label rates	On earliest observation of infection, apply two applications in the bunch zone 7 days apart	For each application, apply in both directions to assist better coverage (see www.henrymanufacturing.co.nz for further information)
Maturity Enhancement / Botrytis Resilience	1.25L HML32 per 100L	Apply no more than two applications of HML32 alone in the bunch zone: White grapes: 1 st appl- at 8.5 brix (50%veraison E-L35-36) 2 nd appl. 10 days after 1st application Red grapes: 1 st appl- 7 days after 8.5 brix (50%veraison E-L35-36) 2 nd appl. 10 days later first application	Best suited to moderate and heavy cropped vines, particularly where there is a risk of end of season rots. Apply at a rate of 9L/100m row spraying in both directions for each application. HML32 must be the only material in the spray tank. Applications thicken skins, intensify colour, provide botrytis/slip skin resilience as well as potential to bring the harvest date forward. There may be some reduction in yield due to mild desiccation. Do not apply if vines are subject to water stress - see notes on website.

COMPATIBILITY
HML32 is an alkaline material. It is normally compatible with wettable sulphur, further additions of potassium bicarbonate (no more than 300g/100L), and proprietary copper hydroxides and cuprous oxides (Do not use copper sprays in the flowering period if there is a risk of slow drying). Do not add other pesticides or materials unless they have been specifically identified as being compatible. HML32, when mixed in hard water (high in dissolved mineral cations) may have mixing issues. **Where growers have hard water or are combining other additives (such as trace elements), it is recommended that a small premix (a jar test) is made to determine compatibility.**

WITHHOLDING PERIOD:
3 days before harvest
1 day before harvest when used in a 0.5% solution (as an adjuvant)
These are voluntary withholding periods that are not residue based (MRL based) to cover off the rare occurrence of an off-flavour on the fruit. This off-flavour has never been detected in wines.

PRE-HARVEST INTERVAL FOR NIL RESIDUE (refer New Zealand Winegrowers):
14 days before harvest
Growers should refer to NZ Winegrowers Vineyard Spray Schedule, before use.

HML32 can be applied on certified organic properties as a fungicide. Growers need to confirm with their certifiers before use.

Exclusion of Liability: Please Read
To the extent permitted by law, buyers and/or users of the goods accept that Henry Manufacturing Limited as the manufacturer and distributor, nor any other distributor have any liability or responsibility whatsoever for any loss, damage or injury whether in contract or tort, whether direct, indirect or consequential howsoever arising in connection with the supply of these goods.

Batch No. _____ DOM: _____

Expiry Date: _____



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