

WARNING

KEEP OUT OF REACH OF CHILDREN



NORSHIELD 45WG



**PROTECTANT COPPER
FUNGICIDE**

grochem

Contains: 450g/kg copper as cuprous oxide in the form of a water dispersible granule.

PROPER SHIPPING NAME:

**ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, NOS
UN NO. 3077**



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NET CONTENTS
10KG

REGISTERED TO: ADAMA New Zealand Ltd.
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GCNORSH/1224



NORSHIELD 45WG

PLEASE READ LABEL COMPLETELY BEFORE USE

DANGER: May cause damage to organs.
Very toxic to aquatic life. Toxic to terrestrial vertebrates

FIRST AID: If medical advice is needed, have product label or container at hand.

IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

IF ON SKIN: Wash with soap and water.

IF INHALED: Call a POISON CENTRE or doctor/physician if you feel unwell or if irritation persists.

24-hour Emergency Telephone Number – for advice contact the National Poisons Centre – 0800 POISON (0800 764 766) – or a doctor, immediately.

For specialist advice in an emergency only, call 0800 CHEMCALL (24hrs) or 0800 243 6225. In a transport emergency dial 111.

TRANSPORT: Do not carry on a passenger service vehicle. Segregate from foodstuffs.

SAFETY DATA SHEET: A Safety Data Sheet (SDS) is available from Grochem or www.grochem.com

STORAGE: Store in original container tightly closed and in a locked, dry, cool, well ventilated area, away from feed, seeds and foodstuffs. Storage must be in accordance with the current version of NZS 8409 Management of Agrichemicals. When stored appropriately, this product should show no significant degradation for 2 years from the date of manufacture (D.O.M.). Contact your supplier for further information about the use of any product that is older than this.

HANDLING: Do not breathe dust, fume, gas, mist, vapours or spray. Wash hands, face and all exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment.

DISPOSAL: Dispose of this product only by using according to the label, or at an approved landfill, or another approved facility.

Avoid contamination of any water supply with product or empty container.

Container Disposal – Triple rinse empty container and add rinsate to spray tank. Recycle at an appropriate recycling depot (eg Agrecovery).

SPILLAGE: Wear protective clothing and prevent material entering waterways. Absorb spill with inert material and place in waste containers. Wash area with water and absorb with further inert material. Dispose of waste safely in an approved landfill.

CONDITIONS OF SALE: Grochem®, a brand of ADAMA New Zealand Limited (Grochem) will not accept any responsibility whatsoever and howsoever arising and whether for consequential loss or otherwise in connection with the supply of these goods other than the responsibility for the merchantable quality of the goods and such responsibilities mandatorily imposed by the Statutes applicable to the sale and supply of these goods. To the extent allowed by such Statutes the liability of Grochem is limited to the replacement of the goods or (at the option of Grochem) the refund of the price paid and is conditional upon a claim being made in writing and where possible sufficient part of the goods to enable proper examination being returned to Grochem within thirty days of delivery.

Registered pursuant to the ACVM Act 1997, No. P9734

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

Approved Pursuant to the HSNZ Act 1996, No. HSR 101409.

See www.epa.govt.nz for approval conditions

DIRECTIONS FOR USE

It is an offence to use this product on animals.

RESTRAINTS: DO NOT apply when poor drying conditions exist. DO NOT apply when either extreme heat prevails or immediately prior to damaging frost conditions.

Apply by ground-based methods only. Do not apply into or onto water. In use situations when multiple rate options are provided use the lower rates when disease pressure is light and higher rates when disease pressure is severe.

GENERAL INSTRUCTIONS:

COMPATIBILITY: Norshield 45WG is compatible in the spray tank with spray oils, and most commonly used neutral or slightly alkaline fungicides, insecticides and miticides. DO NOT tank mix with acidic chemistry. Observe all precautions and limitations on labels of all products used in mixtures. If compatibility is a question, conduct a compatibility test before mixing. Mixtures with calcium nitrate may give rise to small skin markings on citrus. Kiwifruit – tank mixtures post fruit set may result in fruit marking.

RESISTANCE MANAGEMENT STRATEGY: Norshield 45WG is a member of the inorganic copper group of fungicides with multi-site activity. Norshield 45WG is a Group M1 Fungicide.

Some naturally occurring fungi and bacteria resistant to Norshield 45WG and other Group M1 fungicides may exist through normal genetic variability in any population. These will not be controlled by Norshield 45WG or other Group M1 fungicides. The resistant individuals can eventually dominate the population if copper products are used repeatedly. Since the occurrence of resistance is difficult to detect prior to use, ADAMA NZ Ltd accepts no liability for any losses that may result from the failure of Norshield 45WG to control resistant fungi or bacteria. To prevent or delay the development of resistance, use Norshield 45WG in tank mixtures where appropriate, and/or in rotation with fungicides or bactericides having a different mode of action.

Refer to www.resistance.nzpps.org for further information.

Leaf Plucking in Vineyards: Sheep must not be sent for slaughter or milked for 6 months after being removed from the vineyard (and placed on clean feed).

EQUIPMENT: Apply using accurately calibrated and maintained equipment in accordance with The New Zealand Standard for the Management of Agrichemicals (NZS8409).

MIXING: Add slowly to the spray tank partially filled with water and agitate mixture to maintain uniform suspension. If using in a mixture with an emulsifiable concentrate, add after making the emulsion. Otherwise add insecticides, nutrients, etc after the Norshield 45WG. Ensure adequate agitation both during mixing and application. Rates as stated in directions for use are for dilute spray volume application.

WITHHOLDING PERIOD: DO NOT apply to fruit crops later than 1 day before harvest.

The rates provided are for high volume spraying to thoroughly wet the crop to the point of run-off. For concentrate spraying adjust the dilution rates accordingly. As per EPA HSNZ Approval Controls, apply a maximum rate of 5.8 kg Norshield 45WG (3 kg of copper) per hectare per application, with a minimum interval of 10 days between applications.

Crop	Disease	Rate per 100L water	Critical Comments
Grapes	Downy mildew, black spot	80-150 g	Apply at bud break & continue during pre and post bloom period every 14 days throughout the season as needed. Note: Discontinue if signs of injury are observed.
		160 g	Under severe pressure or when Downy mildew has already established to prevent further spread,
	Powdery mildew, botrytis, sour rot	80-130 g	The control of Sour Rot and the suppression of Powdery Mildew and Botrytis. Full control of Powdery Mildew and Botrytis may not be obtained under very high pressure situations. Apply at 10-14 day intervals throughout the season as required. To stay within the wine industry guidelines of less than 3kg metal copper per ha per season apply no more than 8 applications per season at 0.8kg/ha.
Apples	European Canker	78-100 g	Apply first application immediately post harvest, before the occurrence of wet weather. Reapply at the beginning of leaf fall and repeat as required to provide cover of leaf scars until leaf fall is complete. Ensure good coverage.
	Apple Scab	100g	Apply as full cover spray between silver tip and green tip. Warning: Discontinue when green tip is 1cm long as late application may cause phytotoxicity.
	Fire blight	75g	
Kiwifruit	Leaf spot, botryosphaeria	92 - 117 g	Apply as a dormant season spray only. Apply after harvest but before leaf fall, after pruning and as 2 sprays 1 month apart, before bud burst.
	PSA (Pseudomonas syringae pathovar actinidiae)	92 – 117g 62.5g	Apply after harvest but before leaf fall, after pruning and as 2 sprays 1 month apart, before bud burst Pre- and Post-flowering. Do not apply to open flowers. Apply full dilute water rate, appropriate for the size of canopy to give complete coverage. Apply as required to prevent infection. Warning higher rates and/or multiple applications and/or poor drying conditions can result in leaf drop, leaf marking, and marginal leaf burn. Fruit marking may occur from any application post flowering. Apply alone, post flowering, tank mixing with other chemistry may increase the risk of fruit marking and leaf damage.