

DANGER
Keep out of reach of children



Kocide[®] Opti[™]

FUNGICIDE/BACTERICIDE

ACTIVE INGREDIENT: Contains 300 g/kg copper present as copper hydroxide in the form of a water dispersible granule.

GROUP	M1	FUNGICIDE
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A water dispersible granule protectant fungicide for the control of various diseases of fruit and vegetable crops.

READ LABEL BEFORE USE

NET CONTENTS: 1.5 kg, 10 kg

Corteva Agriscience New Zealand Limited

Private Bag 2017

New Plymouth 4342

www.corteva.co.nz

Telephone: 0800 803 939



INFORMATION WITHIN THIS BOX IS NOT PART OF THE LABEL
Kocide[™] Opti Fungicide/ Bactericide

9 November 2023

DANGER



Harmful if swallowed.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause damage to organs (Lungs) through prolonged or repeated oral exposure.
Very toxic to aquatic life with long lasting effects.
Hazardous to terrestrial vertebrates.

FIRST AID

IF SWALLOWED: Contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor if you feel unwell. Rinse mouth.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. Immediately call a poison centre or doctor/physician.

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice. Take off contaminated clothing and wash it before re-use.

If medical advice is needed, have the product container or label at hand.

SAFETY DATA SHEET

A Safety Data Sheet for Kocide® Opti™ Fungicide/Bactericide is available from Corteva Agriscience on request. Call Customer Service Toll Free on 0800 803 939 or visit www.corteva.co.nz

HANDLING PRECAUTIONS

DO NOT breathe dust or spray mist.

DO NOT eat, drink or smoke when using this product.

Avoid skin and eye contact.

PERSONAL PROTECTION

When opening the container, preparing the product for use and applying the product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length chemical resistant gloves, and a face shield or goggles with a disposable dust and mist face mask covering mouth and nose. Wash hands and face thoroughly after use. Contaminated clothing should not be allowed out of the workplace. After each day's use wash gloves and contaminated clothing.

RE-ENTRY

DO NOT allow entry into treated areas until the spray has dried. If prior entry is necessary, wear personal protective equipment as described above.

PROTECTION OF THE ENVIRONMENT

Avoid release to the environment.

DO NOT apply directly into or onto water.

Ensure any granules are not accessible to birds.

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

CROP SAFETY - FROST INJURY PROTECTION (Bacterial Ice Nucleation Inhibitor)

Application of Kocide® Opti™ made to all crops listed on this label at the rates indicated, 2 - 5 days prior to anticipated frost conditions, will afford control of ice nucleating bacteria (*Pseudomonas syringae*, *Erwinia herbicola* and *Pseudomonas fluorescens*) and may therefore provide protection against light frost. Not recommended for those geographical areas where weather conditions favour severe frost.

STORAGE

Store in original container, tightly closed and under lock and key. Store in a cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT store with Class 1, 2, 3.2, 4 or 5 substances or feed, seeds or foodstuffs.

Stores containing more than 100 kg of this product require secondary containment and are subject to signage. See the Health and Safety at Work (Hazardous Substances) Regulations and the New Zealand Standard for the Management of Agrichemicals (NZS8409) for further information.

When stored appropriately, this product should show no significant degradation for a minimum of 2 years from the date of manufacture.

SPILLAGE

DO NOT touch or walk-through spilled material. Wear the protective equipment recommended above. Sweep up contaminated material and place in appropriately labelled drums, for disposal at a licensed local authority landfill. Report large spills to Corteva Agriscience Emergency Services at 0800 844 455.

DISPOSAL

Bag

Shake bag contents into spray tank until the bag is empty. DO NOT dispose of undiluted chemicals on site. Puncture or shred and bury empty bags in a local authority landfill. If no landfill is available, bury the bags below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. DO NOT burn empty bags or product.

Dispose of equipment cleaning water onto ground away from susceptible crops and plants.

DO NOT dispose of this product; spray mix or equipment cleaning water down drains or sewers.

HDPE container

Triple rinse empty container and add rinsate to spray tank. Triple rinsed containers containing the Agrecovery logo on the label and that are free of all residues (liquid and dry) and have an intact legible label should be taken to an Agrecovery collection site. Otherwise crush and bury in a suitably approved landfill. DO NOT burn empty containers.

Dispose of unused product only by using it according to the label, via Agrecovery (visit www.agrecovery.co.nz or call 0800 AGRECOVERY (247 326) for information about the type and quantity of chemical acceptable for disposal), or at an approved landfill. DO NOT burn.

Dispose of equipment cleaning water onto ground away from susceptible crops and plants.

DO NOT dispose of this product; spray mix or equipment cleaning water down drains or sewers.

QUALIFICATION REQUIREMENTS

Persons mixing, loading, applying, or otherwise handling Kocide® Opti™ must meet the qualification requirements set out in the EPA Hazardous Substances (Hazardous Property Controls) Notice 2017.

RECORD KEEPING

Records of use, as described in the EPA Hazardous Substances (Hazardous Property Control) Notice 2017 and the New Zealand Management of Agrichemicals (NZS8049) must be kept when any quantity is being used in a place where members of the public may be present, or where the substance may enter air or water and leave the place.

NOTICE

Important: You **must** read the warning and conditions given on this label. If they are not acceptable, or if you are in doubt as to the proper handling of this product (including its transport, storage, use, disposal, and qualification requirements [if applicable]) then return the unopened product to the supplier at once.

Warning: This product is subject to controls and could be hazardous if handled incorrectly. The **user is responsible** for ensuring that the handling of this product is in accordance with the law (including the *Hazardous Substances and New Organisms Act 1996* and the *Agricultural Compounds and Veterinary Medicines Act 1997*) and with the directions provided. **The Registrant declines all liability** (whether in contract, tort (including but not limited to negligence), or otherwise) to the maximum extent permitted by law in relation to the handling of this product in a manner which is contrary to the directions given or to any applicable Acts, Regulations or Guidelines.

Further information regarding the applicable Acts, Regulations and Guidelines for the proper handling of this product may be obtained by contacting EPA New Zealand (www.epa.govt.nz) or the Ministry for Primary Industries (MPI) (www.foodsafety.govt.nz).

This product is warranted to contain the specified active ingredients within accepted analytical tolerance when packed.



Registered to: Corteva Agriscience New Zealand Limited Private Bag 2017 New Plymouth 4342 Telephone: 0800 803 939 www.corteva.co.nz	EMERGENCY RESPONSE (All hours) Ring from anywhere in New Zealand 0800 844 455, Or Globally +64 6 751 2407	IN A TRANSPORT EMERGENCY DIAL 111 FOR POLICE OR FIRE
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Registered pursuant to the ACVM Act 1997, No P7726.
See www.foodsafety.govt.nz for registration conditions.

Approved pursuant to HSNO Act 1996, EPA Approval Code HSR000739
See www.epa.govt.nz for approval controls.

TRANSPORT

DO NOT carry this product in a passenger service vehicle.

	UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper hydroxide) Marine pollutant
	UN Number:	3077

Date of Manufacture:

Batch No.

Barcode

GENERAL INSTRUCTIONS

Kocide® Opti™ is a stable form of copper hydroxide in a dry flowable formulation. It is characterized by an extremely easy to pour, free flowing formulation, fine particle size, ease of dispersion and stable spray suspensions. It has high activity in controlling a variety of plant diseases.

Kocide® Opti™ is formulated for application from all types of spray equipment. The spray volume applied per hectare will depend on the spray equipment used, the specific crop and stage of crop growth. For dilute, high-volume sprays, use 200 litres (air assisted booms) to 800 litres (hydraulic booms) of water per hectare on most vegetable crops, up to 2500 litres per hectare on mature kiwifruit and grape vines, up to 3000 litres per hectare on mature citrus, and up to 6000 litres per hectare on mature avocados and fruit orchards. FOR LOW VOLUME, SEMI CONCENTRATE SPRAYS ADJUST THE SPRAY TANK CONCENTRATION TO APPLY THE SAME QUANTITY OF KOCIDE® OPTI™ PER HECTARE AS FOR DILUTE SPRAYS.

EQUIPMENT

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

MIXING INSTRUCTIONS

Kocide® Opti™ fungicide/bactericide is not water soluble, it is water dispersible and as such must have direct contact with water to disperse. Always pour Kocide® Opti™ slowly into water while stirring. No additional surfactants are needed.

Fill spray tank one-half full with water. Pour the correct quantity of Kocide® Opti™ slowly into the tank while hydraulic or mechanical agitation nutrients etc should be added last only after the Kocide® Opti™ has been thoroughly mixed. Observe all cautions and limitations on the labels of all products used in mixtures. If compatibility

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9 November 2023

is in question, use the compatibility jar test before mixing. Kocide® Opti™ may be measured volumetrically. As a guide use the scale below. Pour Kocide® Opti™ slowly into a dry measuring cylinder or jug.

KOCIDE® OPTI™

50 g	= 55 mL
100 g	= 110 mL
150 g	= 165 mL
200 g	= 220 mL
250 g	= 275 mL
300 g	= 330 mL
500 g	= 550 mL
1000 g	= 1100 mL

NOTE: Measurement by weight is the most accurate.

COMPATIBILITY

Kocide® Opti™ is compatible with most commonly used fungicides and insecticides as a tank mix. DO NOT MIX with Attack®¹ for use on glasshouse crops. DO NOT MIX with diazinon or with strongly alkaline or acidic materials. If compatibility is in question, use the compatibility jar test before mixing a whole tank. For further information, consult your supplier.

The mixing sequence recommended is: water soluble bags, dry flowable or water dispersible granules (Kocide® Opti™), wettable powders, water based suspension concentrates, water soluble concentrates, oil dispersion concentrates, emulsifiable concentrates, adjuvants and surfactants, soluble fertilisers.

CROPS CULTIVARS NOT TESTED

The crop safety of all potential tank-mixes, including additives and other pesticides, on all crops has not been tested. Before applying any tank-mixture not specifically recommended on this label or other Corteva Agriscience supplemental labelling, the safety to the target crop must be confirmed. To test for crop safety, apply the combination to a small area of the target crop in accordance with the label instructions to ensure that a phytotoxic response will not occur.

Not all crops within a crop group, and not all varieties, cultivars or hybrids of crops, have been individually tested for crop safety. It is not possible to evaluate all applications of Kocide® Opti™ for crop safety on all crops within a crop group, on all varieties, cultivars, or hybrids of those crops, or under all environmental conditions and growing circumstances. To test for crop safety, apply the product in accordance with the label instructions to a small area of the target crop to ensure that a phytotoxic response will not occur, especially where the application is a new use of the product by the applicator.

APPLICATION

Apply with well maintained, accurately calibrated spray equipment. Complete spray coverage is essential for disease control. Ensure good spray penetration amongst foliage. For specified crops DO NOT apply less than the label recommended minimum rate of Kocide® Opti™. Under heavy disease pressure or when conditions favour disease, use the higher rate and shorter spray intervals specified for each crop. Use the higher rates for larger mature tree crops and dense foliage.

The per hectare use rate of Kocide® Opti™ is applicable for both dilute and concentrate spraying. For concentrate spraying or aerial application, test for compatibility with other chemicals and tolerance to crop injury prior to full scale commercial utilization. While volume is important in obtaining full spray coverage,

often factors such as foliage density, environmental conditions and sprayer calibrations, have a greater impact. Ensure that sprayers are calibrated to spray equipment manufacturer's specifications and environmental conditions are within acceptable tolerances.

NOTE: Kocide® Opti™ should not be applied in a spray solution having a pH of less than 6.5 as phytotoxicity may occur. Applying Kocide® Opti™ in a spray solution having a pH greater than 9.0 may result in reduced level of disease control. Environmental conditions such as extended periods of wet weather, which alter the pH of the leaf surface, may affect the performance of Kocide® Opti™ resulting in possible phytotoxicity or loss of effectiveness.

CLEANING OF SPRAY EQUIPMENT

Rinsing

Empty the spray tank completely and drain the whole system. Thoroughly wash inside the unit using a pressure hose. Drain spray unit and clean any filters in the tank, pump, lines, hoses and nozzles.

After cleaning the spray units as above, quarter fill with clean water and circulate the water through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.

Discard rinse water on land already sprayed or on wasteland away from desirable plants and water sources.

Decontamination

Following an application of Kocide® Opti™ all spraying equipment must be thoroughly cleaned both inside and out with a suitable spray tank cleaner. Follow the instructions on the tank cleaner label for the decontamination process. DO NOT use chlorine-based tank cleaners.

Once decontamination has been completed, cleaning water should be discharged onto a designated disposal area, or onto unused land away from desirable plants and water sources.

RESISTANCE MANAGEMENT

GROUP	M1	FUNGICIDE
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Kocide® Opti™ is an inorganic fungicide (Group M1). Some naturally occurring individual fungi resistant to Group M1 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi will not be controlled this product or other Group M1 fungicides, thus resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistant fungi is difficult to detect prior to use, Corteva Agriscience New Zealand Limited accepts no liability for any losses that may result from the failure of this product to control resistant fungi. Monitor insect populations for loss of field efficacy. For further information contact your farm chemical supplier, consultant, or local Corteva Agriscience Representative.

DIRECTIONS FOR USE

It is an offence to use this product on animals.

CROP	DISEASE	RATE g/100 L	APPLICATION RATE AND TIMING
Apples	Black spot	110 (minimum 2.2 kg/ha)	Apply as a full cover spray. Make application between silver tip and green tip. CAUTION: Late application may cause phytotoxicity. Discontinue use when green tip is 1 cm.
Asparagus	Stemphylium leaf spot	250 - 375 (minimum 2.5 kg/ha)	Commence spraying at first appearance of disease after closing up and repeat at 14-day intervals. Ensure good plant coverage. Under high disease pressure a program of up to six applications may be necessary.
Avocado	Anthrachnose	70 – 90 (minimum 2.0 kg/ha)	Apply at monthly intervals from flowering to harvest. Use the higher rate when conditions favour disease. During prolonged wet weather, reduce application intervals to 14 days.
Beans	Bacterial blight (Halo and common)	250 - 310 (minimum 1.36 kg/ha)	Apply as a protective spray at 7 -14 day intervals when plants are 15 cm high.
Bushfruit Cane	Cane wilt, Cane spot, Spur blight, Leaf spot	70 – 90 (minimum 0.65 kg/ha)	Apply at bud burst and green tip and as a seasonal spray at 10 - 14 day intervals. Use the higher rate early season or under high disease pressure.
Brassica vegetables: Cabbage Cauliflower Broccoli Brussel Sprouts	Downy mildew	70 – 90 (minimum 0.3 kg/ha)	Begin application after transplants are set in the field shortly after emergence of field seeded crops. Repeat at 10 – 14-day intervals.
Celery	Septoria Leaf spot	90 (minimum 0.44 kg/ha)	Apply as soon as the plants are set in the field, then at 5 - 7 day intervals depending on disease severity and environmental conditions. Sunspray® ¹ may be added at 1 litre per 100 litres of spray mix.
Citrus	Melanose Verrucosis	45 – 90 (minimum 0.44 kg/ha for mature trees)	Apply during pre and post bloom periods.
	Brown rot	90 - 110 (minimum 1.75 kg/ha for mature trees)	Apply in the autumn and continue as needed. Apply to skirts of trees to a height of at least 1 metre. Apply also to bare ground 0.5 metres beyond skirt. Use higher rates when conditions favour disease. Copper marking may occur on sensitive varieties or under slow drying conditions.
Cucurbits	Angular leaf spot Downy mildew	70 - 130 (minimum 0.65 kg/ha)	Apply at 7-day intervals after plants have started to vine.
Feijoas	Leaf spot (Glomerella sphaceloma)	70 - 90 (minimum 1.0 kg/ha)	Repeat as necessary.

CROP	DISEASE	RATE g/100 L	APPLICATION RATE AND TIMING
Forestry, Pinus radiata	Pine needle blight (<i>Dothistroma pini</i>)	2.5 - 4.4 kg/ha (aerial to plantations)	Apply in 60 - 100 L/ha. Make one application in November or early December. Repeat at yearly intervals if necessary.
		1.25 - 3.1 kg/ha (ground application to nurseries)	Apply with 1% summer oil in 600 - 1,100L of water/ha. Commence spraying in October or November and repeat at monthly intervals until planting out.
Grapes	Black spot Downy mildew	65 - 130 (minimum 0.9 kg/ha)	Begin application at bud break and continue to apply during the pre and post bloom periods at 10 - 14 day intervals until harvest. NOTE: Discontinue use if signs of injury are observed.
Kiwifruit	Leaf spot (Phomopsis sp. and others), Botryosphaeria	70 to 90 The rate is for dilute spraying only (spray up to point of run-off).	Apply as post-harvest dormant spray only. Apply after harvest but before leaf fall, after pruning, and as two sprays one month apart prior to bud burst.
	Psa (<i>Pseudomonas syringae pathovar actinidiae</i>) (suppression only)	For concentrate spraying, adjust dilution rate accordingly.	Apply as protectant timed prior to a significant rainfall (infection) event or immediately after when crop is dry. Apply at pre- and post-flowering. DO NOT apply to open flowers. Use the higher rate if a major or extended rain event is expected. 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, but the risk will reduce as the season progresses. Some varieties appear more sensitive than other varieties to repeated applications of copper. Tank mixing with other chemistry may increase fruit marking and leaf damage. Kocide® Opti™ must be used as part of a Psa management program. Refer to the latest Zespri Crop Protection program and Kiwigreen Best Practice guidelines for more information.
Lettuce	Downy mildew	70 - 110 (minimum 0.33 kg/ha)	Begin treatment from seed emergence or when transplants are set in the field and repeat every 7 - 10 days as needed to suppress the disease.
Onions	Downy mildew Bacterial blight	90 (minimum 1.0 kg/ha)	Apply when the disease first appears and repeat every 10 - 14 days while conditions allow infection.
Passionfruit	Septoria spot Brown rot Grease spot	45 (minimum 0.44 kg/ha)	Apply at 2 – 4 week intervals alternating with mancozeb from November to March. Where grease spot is a problem, 2-week intervals may be necessary.
Peas	Downy mildew Leaf spot	70 - 90 (minimum 0.66 kg/ha)	Apply from seed emergence and repeat at 7 - 14 day intervals depending upon disease severity.

CROP	DISEASE	RATE g/100 L	APPLICATION RATE AND TIMING
Pear (including Nashi)	Black spot	110 (minimum 2.2 kg/ha)	Apply as full cover spray. Make application between silver tip and green tip. CAUTION: Late application may cause phytotoxicity. Discontinue use when green tip is 1 cm. NON-BEARING TREES: Maintain a protective cover of regular sprays at 14 - 21 day intervals until active vegetative growth ceases. Reduce interval between sprays if wet weather persists. POST HARVEST: Apply at 110 g/100 litres at 21-day intervals from harvest to leaf fall. Reduce intervals between sprays if wet weather occurs and vegetative growth is active. SMOOTH SKIN VARIETIES: DO NOT apply between green tip and harvest as russetting may occur.
	Fire blight (Erwinia amylovora)	25 - 45	
Potato	Early blight Late blight	130 – 200 (minimum 1.3 kg/ha)	Apply every 7 days from when plants are 15 cm high until 2 weeks before harvest.
Strawberries	Leaf spot	70 - 90 (minimum 0.65 kg/ha)	Begin application when plants are established and continue on a weekly schedule throughout the season. Use the higher rate early season or under high disease pressure. NOTE: Discontinue if signs of crop injury appear.
Stone Fruit	Leaf curl Shot hole Bladder plum	110 (minimum 2.2 kg/ha)	Correct timing is critical for effective control. Apply when buds are swelling but BEFORE and within ONE WEEK OF BUD OPENING, with a second application of 115 g/100 litres of water 10 - 14 days later.
	Bacterial blast	312 (minimum 6.25 kg/ha)	Apply at leaf fall and repeat at monthly intervals throughout the winter until bud movement, then treat as for leaf curl
Tamarillo	Leaf spot	70 (minimum 0.9 kg/ha)	Apply as necessary.
Tomato	Early blight Late blight Bacterial speck Bacterial spot	70 - 130 (minimum 0.8 – 1.75 kg/ha)	Apply at 7 - 10 day intervals depending on conditions favourable for development of the disease. Ensure spray volumes are increased as crop reaches maximum growth so that full cover spraying of upper and lower leaf surfaces is obtained. Repeat application after more than 13 mm rain or irrigation.

WITHHOLDING PERIOD

It is an offence for users of this product to cause residues exceeding the relevant MRL in the Food Notice: Maximum Residue Levels for Agricultural Compounds.

No withholding period is required if used as directed.

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®¹ Registered trademark of another company