

**HARMFUL • ECOTOXIC**  
**KEEP OUT OF REACH OF CHILDREN**

Nufarm

# Tri-Base Blue<sup>®</sup>

**Active Ingredient:** 190g/litre copper as tribasic copper sulphate  
in the form of a suspension concentrate

**A protectant copper fungicide for the control of  
many diseases on fruit, vegetable and ornamental crops**



AGRECOVERY

[www.agrecovery.co.nz](http://www.agrecovery.co.nz)

**Net: 10 Litres**



9 414614 309113

L61880615



Grow a better tomorrow.

**HAZARD CLASSIFICATION:** 6.1D, 6.3A, 6.4A, 6.5B, 6.9B, 9.1A, 9.3B

**APPROVED HANDLER:** This product must be under the control of an approved handler when it is applied in a wide dispersive manner or used by a commercial contractor.

This product must not be used for any purpose, or in any manner contrary to this label unless authorised under appropriate legislation.

**TOXICITY**

- Harmful – may be harmful if swallowed, inhaled or absorbed through the skin. May cause skin and eye irritation, or sensitisation from prolonged skin contact. May cause kidney damage from repeated oral exposure at high doses.

**ECOTOXIC**

- Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container: Tri-Base Blue must not be applied onto or into water.
- Toxic to terrestrial vertebrates.

**HANDLING PRECAUTIONS**

**STORAGE**

- Store in original container, tightly closed and in a locked, dry, cool area away from foodstuffs. Store in accordance with NZS8409 Management of Agrichemicals.
- Stores containing 100 litres of Tri-Base Blue are subject to secondary containment and signage and more than 100 litres requires emergency response plans.

**PERSONAL PROTECTION**

- Do not get in eyes. Avoid skin contact and inhalation of spray mist. Wear protective clothing such as impervious gloves, eye protection, boots and overalls when mixing or applying. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work.

**EQUIPMENT**

- Apply using well maintained and accurately calibrated equipment. Flush equipment thoroughly with clean water after use.

**DISPOSAL**

- Triple rinse empty container and add rinsate to the spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.
- Dispose of product only by using according to the label, or at 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 immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, wash out immediately with water. If inhaled, move victim to fresh air immediately. Begin artificial respiration if breathing has stopped.

**Spillage:** Wear appropriate protective clothing and prevent material from entering waterways. Contain liquid spills and absorb with inert material. Wash area with water and absorb with further inert material. Dispose of waste safely in an approved landfill.

**Transport:** Do not carry Tri-Base Blue on a passenger service vehicle.

**Record Keeping:** Records of use as described in NZS8409 Management of Agrichemicals must be kept if 3 litres or more of Tri-Base Blue is applied within 24 hours.

**Compatibility and Mixing:** Shake or stir well before use. Add two thirds of the required quantity of water to the spray tank and with the agitation system going, slowly add the Tri-Base Blue. Continue agitating while filling with water. Agitate thoroughly before and during spraying and before recommencing spraying after a stoppage. Tri-Base Blue is physically compatible with most commonly used fungicides, insecticides and spreader-stickers including Success™, Natralyte™, Paramite® PF, Fyfanon, Proclaim® PF, Avid®, Prodigy™ and D-C Tron®. The addition of insecticides, spreader-stickers etc, should be made last after Tri-Base Blue has been thoroughly mixed. Spray adjuvants such as Contact Xcel™ may be added to the tank mixture to enhance wetting and spreading on hard-to-wet crops such as brassicas, peas and onions. Note the warning in the Directions for Use table relating specifically to crop safety issues if Tri-Base Blue is applied in tank mixture with other products on kiwifruit.

**Resistance Management:** Tri-Base Blue is a member of the inorganic copper group of fungicides with multi-site activity. Tri-Base Blue is a **GROUP M1 FUNGICIDE**. Some naturally occurring fungi resistant to Tri-Base Blue and other Group M1 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the population if these fungicides are used repeatedly. The resistant fungi will not be controlled by Tri-Base Blue or other Group M1 fungicides. Since the occurrence of resistant fungi is difficult to detect prior to use, Nufarm Limited accepts no liability for any losses that may result from the failure of Tri-Base Blue to control resistant fungi. To prevent or delay the development of resistance use Tri-Base Blue in tank mixtures where appropriate, and/or in rotation with fungicides having a different mode of action. Refer to [www.resistance.nzpps.org](http://www.resistance.nzpps.org) for further information.

Registered pursuant to the ACVM Act, No. P8732

See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

Approved pursuant to the HSMO Act 1996, Approval Code HSR100808  
See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls.

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**CONDITIONS OF SALE:**

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The results from use of this product may be affected by factors beyond Nufarm's control, including mixing, use, climatic conditions, time of application, crop or crop stage and the possible development of resistance to the active ingredient, even though the product is reasonably fit for the purposes stated in this label, and even though label directions are followed. Nufarm will replace, free of charge, any product which is found to have a manufacturing defect. To the extent permitted by law, all other warranties, guarantees, representations and conditions, whether expressed or implied by law, trade, custom or otherwise are expressly excluded.

When you use this product, you agree that neither Nufarm Limited nor any manufacturer of any component of the product will be liable for any damage, injury or loss including consequential loss which arises in any way from the storage, handling, or use of the product. This exclusion of liability includes loss caused by negligent acts or omissions of Nufarm Limited or any supplier or manufacturer of the product or any of their employees and agents.

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[www.nufarm.co.nz](http://www.nufarm.co.nz)

Batch No:

D.O.M.

Nufarm Emergency PhoneInk: 0800 651 911 toll free 24 hours

PROPER SHIPPING NAME	HAZARD CLASS	UN No.	HAZCHEM	PACKING GROUP
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID N.O.S. (copper 19%)	9	3082	2X	III

## Directions for Use:

### It is an offence to use this product on animals.

Tri-Base Blue may be applied through standard ground and aerial spray equipment using nozzles and pressures which produce a medium to fine spray. The recommended dilution rates are for high volume spraying to runoff. The volume of water applied per hectare will depend on the crop being sprayed and should be increased during the season to ensure complete coverage of the growing crop. For concentrate spraying apply the same volume of Tri-Base Blue per hectare as for dilute sprays.

In conditions of severe disease pressure use the higher recommended rates and reduce the spray interval.

**Warning:** Soft growth of some plant species may be hardened or injured by copper sprays. Do not use on copper-shy crops or cultivars. Discontinue use on any crop if signs of injury occur. Do not apply if temperatures exceed 35°C. Do not apply to wet crops or if it is likely to rain before the spray is dry. Do not use in spray solutions less than pH 6.5.

Crop	Disease	Rate		Critical Comments
		Per 100L	Per Hectare	
<b>FRUIT CROPS</b>				
Avocados	Anthracnose	280ml	2.8-5.6L (mature trees)	Apply at monthly intervals from flowering until harvest. During prolonged wet weather reduce the application interval to 14 days.
Berryfruit	Cane wilt Leaf spot Cane spot Spur blight	280ml	2.2L (min)	Apply at bud burst and green tip and continue at 10-14 day intervals.
Citrus	Melanose	280ml	5.6L (mature trees)	Apply as a dilute spray during pre and post bloom periods.
	Brown rot	420ml	5.6L (min)	Apply in autumn.
Feijoas	Leaf spot ( <i>Glomerella sphaceloma</i> )	280ml	2.8L (min)	Apply and repeat as necessary.
Grapes	Downy mildew	250-350ml	2.5-3.5L (min)	Apply when shoots are 10cm long and repeat at 10-14 day intervals. Use the higher rate when conditions are favourable for infection.

Crop	Disease	Rate		Critical Comments
		Per 100L	Per Hectare	
Kiwifruit	Leaf spot ( <i>Phomopsis spp</i> and others, eg <i>Botryosphaeria</i>	280ml	2.8-5.6L	Apply after harvest and during the dormant period
	<b>PSA-Limited Claim</b>  <b>The efficacy of this claim is not fully proven</b>  <i>Pseudomonas syringae pv actinidiae</i>	280ml	2.8-5.6L	<b>For use after harvest and during the dormant period.</b> Apply after harvest but before leaf fall, after pruning, and as 2 sprays one month apart before budbreak. Do not apply within 7 days of Hi-Cane®
		150ml	Up to 1.5L	<b>Budbreak to the start of flowering:</b> Apply to give complete coverage using up to 1000 litres of water/ha. To minimize possible leaf damage it is recommended that no more than three copper sprays are applied, at least 10-14 days apart, in a programme with other products which are effective against PSA.  <b>Do not apply to open flowers</b>  <b>Post Flowering to Harvest:</b> Applications of copper in the post flowering period are not recommended as fruit marking may occur in some situations.
<b>WARNING:</b> Copper sprays may be phytotoxic to kiwifruit leaves, flowers, or fruit and the conditions under which damage can occur have not been fully determined. Higher rates, weather conditions, multiple applications, fruitlet stage, slow drying, tank mixtures and other products used before or after any copper spray may increase the risk of damage. Copper damage may take several weeks to fully develop. Discontinue the use of copper if damage becomes apparent and unacceptable. Tri-Base Blue may be applied in tank mixture with Actigard. Otherwise do not apply within a week of other pesticides and adjuvants (unless proven safe), or within at least two weeks of oils, amino acids, foliar fertilizers, or acidifying compounds. Before applying Tri-Base Blue read the Conditions Of Sale on the label. If these conditions are not acceptable, do not use. Any adverse event resulting from the use of this product must be notified to Nufarm Limited.				

Crop	Disease	Rate		Critical Comments
		Per 100L	Per Hectare	
<b>FRUIT CROPS</b>				
Passionfruit	Septoria spot Brown spot Grease spot	150ml	1.5L (min)	Apply at 2-4 week intervals, alternating with mancozeb, from November to March. Apply at 2 week intervals where grease spot is a problem.
Pipfruit (Apples, nashi pears)	Black spot	280ml	5.6L (min)	Apply as a dilute cover spray between silver tip and green tip.  CAUTION: Late application may cause phytotoxicity – Discontinue use when greentip is 1 cm.
	Fireblight	150ml	2.8L	Bearing Trees: Apply as for black spot. Non-Bearing Trees: Ascertain cultivar tolerance to copper before using. Maintain a protective cover at 14-21 day intervals until active growth ceases. Post Harvest: Apply at 21 day intervals from harvest until leaf fall.
Stonefruit	Leaf curl Shot hole Bladder plum	280-350ml	5.6-7.0L	Apply in autumn at leaf fall. Apply in spring when buds are swelling but <u>before and within one week of any buds opening</u> . A repeat application can be made 10-14 days later.
	Bacterial Blast	350-500ml	7.0L (min)	Apply at leaf fall and repeat at monthly intervals throughout the winter, then treat as for leaf curl.
Strawberries	Leaf spot	280ml	2.8L	Apply when plants are established and continue on a weekly schedule throughout the season.
Tamarillos	Leaf spot	280ml	2.8L	Apply as necessary

Crop	Disease	Rate		Critical Comments
		Per 100L	Per Hectare	
<b>VEGETABLES</b>				
Asparagus	Stemphylium Leaf spot	400ml	4.0L	Commence spraying after closing up and repeat at 14 day intervals. Ensure good fern and stem coverage. Under high disease pressure a programme of up to 6 applications may be necessary.
Beans	Common blight Bacterial brown spot	280ml	3L	Apply at first sign of infection and repeat at 7-14 day intervals while conditions favour infection.
	Halo blight	280-420ml	3.0 – 3.5L	Apply at 7-14 day intervals from the time the crop is 15-30cm high when conditions allow infection. Use the high rate when conditions are highly favourable for infection.
Brassicac (Cabbage, Cauliflower, Broccoli, Brussels sprouts)	Downy mildew	280ml	3L	Apply at first sign of disease and repeat at 10-14 day intervals while conditions allow infection. CAUTION: Tribasic copper sulphate may predispose cabbages to frost damage. Do not treat cabbages when frosts are likely.
Capiscums	Bacterial spot Bacterial canker	280ml	3L	Seed beds: Apply every 7 days during wet weather.  Field crops: Apply at first sign of disease and repeat every 7-14 days. Use the shortest interval when conditions are favourable for disease. These treatments will reduce the spread of bacterial canker but will not control seed or soil borne infection.
Carrots	Leaf spot	280ml	3L	Apply at first sign of disease and repeat at 10-14 day intervals when conditions allow infection.
Celery	Septoria leaf spot	280-390ml	3L	Apply every 7-14 days while conditions allow infection. Use the shortest interval when conditions are highly favourable for infection (ie cool and wet).
Cucurbits	Angular leaf spot Downy mildew Bacterial leaf spot	280ml	3L	Apply at 7-14 day intervals while conditions allow infection

Crop	Disease	Rate		Critical Comments
		Per 100L	Per Hectare	
Lettuce	Downy mildew	280ml	3L	Apply at first sign of disease and repeat every 7-10 days while conditions favour infection. Alternation with Penncozeb 750DF is desirable.  CAUTION: Tribasic copper sulphate may predispose lettuce to frost damage. Do not treat lettuces when frosts are likely.
Onions	Downy mildew Bacterial blight	280ml	3L	Apply when disease first appears and repeat every 10-14 days while conditions allow infection.
Parsnips	Septoria leaf spot	280ml	3L	Apply when disease first appears and repeat every 10-14 days while conditions allow infection.
Peas	Downy mildew Ascochyta blight Bacterial blight	280ml	3L	Apply from emergence at 10-14 day intervals while conditions allow infection.
Potatoes	Early blight Late blight	280-450ml	3-4.5L	Apply every 7-10 days from when plants are 15cm high until just before harvest.
Red beet	Downy mildew Rust	280ml	3L	Apply every 10-14 days from the seedling stage until maturing, while conditions favour disease.
Rhubarb	Crown rot Downy mildew	280ml 280ml	- 3L	Dip crowns before planting. Apply at 14 day intervals when conditions allow infection.
Silver beet, spinach	Downy mildew	280ml	3L	Apply at 10-14 day intervals from seedling stage until maturity, when conditions allow infection.
Tomatoes	Early blight Late blight Bacterial speck Bacterial spot	220-450ml	2.4-6L	Apply at first sign of disease and repeat at 7-14 days while conditions allow infection. The shorter interval should be used when conditions are favourable for infection (ie during wet weather and when inoculum levels are high). Increase spray volume to 1500 litres/hectare when the crop grows and ensure full coverage of upper and lower leaf surfaces. Repeat application after more than 13cm of rain or irrigation.

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		Per 100L	Per Hectare	
<b>ORNAMENTALS &amp; FORESTRY</b>				
Ornamentals	Bacterial leaf spot	280	3L	Apply at first sign of disease and repeat every 10-14 days as necessary. Tri-Base Blue is ineffective against bacterial wilt of carnations caused by <i>Pseudomonas andropogonis</i> .  CAUTION: Phytotoxicity may occur on some ornamentals. A small scale evaluation consisting of 2 sprays, 14 days apart, should be applied to evaluate crop safety before treating large numbers of plants.
Pine Trees	Pine needle blight	-	4-7L  2-5L	Aerial application to plantations: Apply in 60-100 litres water per hectare in November or early December. Repeat yearly as necessary  Ground operated equipment in nurseries: Apply with 1% summer oil in 600-1100 litres water per hectare. Commence spraying in October or November and repeat at monthly intervals until planting out.

**Withholding Period:** Nil all crops.

Nufarm  
**Tri-Base Blue®**

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