

Infosafe No™ 3NUN6	Issue Date : June 2018	ISSUED by NUFARMNZ
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 Product Name **TRI-BASE BLUE®**

1. Identification

GHS Product Identifier	TRI-BASE BLUE®
Product Code	03091
Product Type	Fungicide
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency phone number	0800 651 911
Email	nzinfo@nufarm.com
Recommended use of the chemical and restrictions on use	A protectant copper fungicide for the control of many diseases on fruit, vegetables and ornamental crops.
Other Information	This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

2. Hazard Identification

Other Information	6.1D acute toxicant, 6.3A skin irritant, 6.4A eye irritant, 6.5B sensitiser, 6.9B target organ toxicant, 9.1A aquatic toxicant, 9.3B terrestrial vertebrate toxicant, TOXICITY Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause skin and eye irritation. May cause sensitisation from prolonged skin contact. May cause kidney damage from repeated oral exposure at high doses. ECOTOXIC Very toxic to aquatic organisms. Toxic to terrestrial vertebrates.
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3. Composition/information on ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Copper present as tribasic copper sulphate	12527-76-3	190 g/L
	Propylene glycol	57-55-6	80 g/L
	Ingredients determined to be non-hazardous	-	Balance

4. First-aid measures

First Aid Measures	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention.
Inhalation	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Ingestion	Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.
Skin	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.
Eye contact	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance. Remove contact lenses, if present and

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First Aid Facilities easy to do.
Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Advice to Doctor Treat symptomatically.
Copper salts may be corrosive to the oesophagus. Do NOT induce vomiting. If spontaneous vomiting has occurred or is suspected, gastric intubation is contraindicated. In cases of severe intoxication, consider chelation therapy with dimercaprol (BAL).

5. Fire-fighting measures

Suitable extinguishing media If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.
Water fog, foam, carbon dioxide or dry chemical.

Unsuitable Extinguishing Media Do not use water in a jet.

Hazards from Combustion Products On burning will emit toxic fumes.
If involved in a fire, it may emit oxides of copper or sulphur, calcium sulphate and water.

Special Protective Equipment for fire fighters Full protective clothing and self-contained breathing apparatus.

Specific Methods Keep up wind. Do not allow washings to reach sewage or effluent systems.

Hazchem Code 2X

Other Information Location Certificate: Not applicable
Hazardous Atmosphere Zone: Not applicable
Number of Fire Extinguishers: Not applicable

6. Accidental release measures

Spills & Disposal Wear protective clothing. Clear area of unprotected personnel. Contain spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.
Wash area with water and absorb with further inert material and collect in sealable container for disposal.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

Environmental Precautions Prevent from entering drains, waterways or sewers.

7. Handling and storage

Precautions for Safe Handling Avoid skin and eye contact and inhalation of spray mist.
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.
TRACKING: Is not required
RECORD KEEPING: Records of use as described in NZS 8409 Management of Agrichemicals must be kept if 3L or more is applied within 24 hours.

Conditions for safe storage, including any incompatibilities Keep out of reach of children.
Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals.
Stores containing 100L of TRI-BASE BLUE require secondary containment and are subject to signage, and more than 100L require emergency response plans.

Other Information Always read the label and any attached leaflet before use.
Aggregate Storage Volume Thresholds:
When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

8. Exposure controls/personal protection

Occupational exposure limit values No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.
WES TWA for propylene glycol (particulates only) = 10 mg/m³

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Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment	When opening the container, preparing spray and using the prepared spray wear safety goggles, waterproof gloves, washable hat, cotton overalls buttoned to the neck and wrist, and boots.
Hygiene Measures	Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work. Wash splashes of concentrate from skin immediately.

9. Physical and chemical properties

Form	Liquid
Appearance	Greenish-blue liquid
Freezing Point	Crystallisation ca. -3°C
Solubility in Water	Disperses in water
Specific Gravity	1.28
pH	7 (13g/L)
Vapour Pressure	Active ingredient is an inorganic salt. Not volatile.
Flammability	Non combustible material
Other Information	(SC) Suspension Concentrate

10. Stability and reactivity

Chemical Stability	Stable under normal conditions of handling and storage.
Conditions to Avoid	Avoid contact with strong acids, iron, aluminium and it's alloys.
Hazardous Decomposition Products	Thermal decoposition products may include: copper oxide, calcium sulphate and water.
Hazardous Polymerization	Hazardous polymerisation will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat) approx. 2,500mg/kg for the formulated product
Acute Toxicity - Dermal	LD50 (rat) >2,000mg/kg for the formulated product
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >2.6mg/L for the formulated product
Ingestion	Possible symptoms of exposure include: vomiting, stomach pains, symptoms attributed to the central nervous system and kidneys, hemolytic crisis accompanied by damage in the liver and brain.
Inhalation	The components of the product are of low volatility and no adverse effects are expected from handling the concentrate.
Skin	May irritate the skin.
Eye	May irritate the eyes.
Skin Sensitisation	May cause sensitisation from prolonged skin contact.
Chronic Effects	Prolonged contact may give rise to some skin diseases especially if small cuts, scratches or abrasions are present or if irritation by contaminated clothing occurs. Elementary hygiene precautions will avoid these risks. Copper Sulphate: Workers exposed by inhalation have reported irritation of the nose and throat, occasional ulceration of the nasal septum, and inflammation and diffuse fibrosis of the lungs. Humans exposed to high levels in drinking water have experienced abdominal pain, vomiting, diarrhoea, nausea, and a metallic taste in the mouth.
Other Information	The Australian Acceptable Daily Intake (ADI) for copper for a human is 0.2 mg/kg/day, set for the public for daily, lifetime exposure. There is no NOEL

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or LOEL or safety factor. (Ref: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', December 2014).

12. Ecological information

Persistence and degradability	This product does not contain any components considered to be persistent.
Environmental Fate	For copper sulphate: The bioconcentration factor (BCF) in fish is 10-100, indicating a low potential for bioconcentration. The BCF is higher in molluscs, especially oysters, where it may reach 30,000. The biomagnification ratio in fish is less than 1, indicating no biomagnification in the food chain. No bioaccumulation was obtained from a study of pollutant concentrations in the muscle and livers of 10 mammal species and no evidence of biomagnification in the food chain was observed.
Environmental Protection	Copper sprays can cause injury to tender foliage or hasten leaf fall.
Basis for Assessment	Ecotoxicological data have not been determined specifically for this product. Data below is for the active ingredient unless otherwise stated.
Acute Toxicity - Fish	LC50 (96hr) for rainbow trout is >100 mg/l for the formulated product
Acute Toxicity - Daphnia	EC50 (48hr) for daphnia magna is 0.72 mg/l for the formulated product.
Acute Toxicity - Algae	EC50 (72hr) for green algae >100mg/L for the formulated product
Acute Toxicity - Other Organisms	LD50 for Japanese quail 1,428mg/kg for the formulated product Not toxic to bees

13. Disposal considerations

Product Disposal	Dispose of product only by using according to the label, or at an approved landfill.
Container Disposal	Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

14. Transport information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
U.N. Number	3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (copper, 19%)
Transport hazard class(es)	9
Hazchem Code	2X
Packaging Method	-
Packing Group	III
EPG Number	-
IERG Number	47
IMO Marine Pollutant	Yes. Environmentally Hazardous Substance mark required.
IMDG EMS	F-A, S-F
Other Information	Do not carry this product on a passenger service vehicle. Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

15. Regulatory information

National and or International Regulatory Information	Registered pursuant to the ACVM Act 1997, No. P8732 See www.foodsafety.govt.nz for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR100808 See www.epa.govt.nz for approval controls.
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Packaging & Labelling	HARMFUL * ECOTOXIC - keep out of reach of children
Hazard Rating	NFPA/HMIS: 2-1-0
Systems	
Hazard Category	HARMFUL * ECOTOXIC - Keep out of reach of children

16. Other Information

Date of preparation or last revision of SDS July 2013

Contact Person/Point IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE
24Hr Tollfree Emergency No: 0800 651 911
24Hr Emergency No: National Poisons Centre Phone: 0800 764 766
5 yearly review carried out. Various changes and updates made to document.

Revisions Highlighted

...End Of MSDS...

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