


Blue Shield DF

Section 1: Identification

Product name:	Blue Shield DF
Other names:	Cupric Hydroxide 50 DF, Copper Hydroxide
Recommended use:	Broad-spectrum fungicide and bactericide for use on fruit and vegetable crops.
Manufacturer/Importer details:	Fruitfed Supplies (part of PGG Wrightson Ltd) 1 William Pickering Drive Albany, Auckland 0632 New Zealand Phone: 09 448 0510
24 hour emergency contact:	0800 CHEMCALL (0800 243 622)
National Poison Centre:	0800 POISON (0800 764 766)

Section 2: Hazard identification

HSNO Approval:	Product is classified as hazardous according to the Hazardous Substances (Hazard Classification) Notice 2020 of the HSNO Act, 1996. HSR000739
Hazardous classification:	Acute toxicity oral Category 4, Eye damage Category 1, Skin sensitisation Category 1, Specific target organ toxicity (repeated) Category 2, Hazardous to terrestrial vertebrates, Hazardous to the aquatic environment (acute) Category 1, Hazardous to the aquatic environment (chronic) Category 1.
Pictograms:	
Signal word:	DANGER
Hazard statements:	H302 Harmful if swallowed. H317 May cause an allergic skin reaction. H373 May cause damage to organs through prolonged or repeated exposure. H318 Causes serious eye damage. H400H410 Very toxic to aquatic life, and with long-lasting effects. Harmful to terrestrial vertebrates.
Prevention statements:	P102 Keep out of reach of children. P103 Read label before use. P260 Do not breathe dust and spray mist. P264 Wash exposed skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace.

Blue Shield DF

Response statements: P280 Wear protective gloves, protective clothing, goggles and respirator.

P101 If medical advice is needed, have product container or label at hand.

P301+P312 IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell..

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P312 Call a POISON CENTRE or doctor if you feel unwell.

P333+P313 If skin irritation or rash occurs: Get medical attention.

P363 Wash contaminated clothing before re-use.

P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P314 Get medical attention if you feel unwell.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTRE or doctor.

P391 Collect spillage.

Storage statement: -

Disposal statement: P501 Dispose of product and containers in accordance with local Regulations. See Section 13 for more details.

Additional Label Requirements: Do not apply directly into or onto water. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Section 3: Composition/information on ingredients

Chemical identity of ingredients with health or environmental hazards:

<i>Ingredient</i>	<i>CAS No.</i>	<i>Proportion % w/w</i>
Copper Hydroxide	20427-59-2	77
Non-hazardous components	Trade secret	Balance

Section 4: First-aid measures

First aid measures: If medical advice is needed, have product container or label at hand. For advice contact the National Poisons Centre 0800 POISON [0800 764 766] or a doctor.

Inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing.

Ingestion: Call a POISON CENTRE or doctor for advice. Rinse mouth. Do NOT induce vomiting.

Skin contact: Wash with plenty of soap and water. Do NOT scrub skin. If skin irritation or rash occurs, get medical attention.

Blue Shield DF

Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately get medical advice: contact the National Poisons Centre 0800 POISON [0800 764 766] or a doctor.
First aid facilities:	Provide eye baths and safety showers close to areas where product contact or splashing may occur.
Advice to doctor:	Treat symptomatically. Mucosal damage may contraindicate use of gastric lavage.
Section 5: Fire-fighting measures	
Flammability:	Non-flammable.
Appropriate extinguishing media:	Water spray, carbon dioxide (CO ₂), dry foam or powder. Extinguishing media should be appropriate to primary cause of fire.
Combustion products:	Oxides of copper.
Special protective equipment and precautions for fire-fighters:	If involved in a fire use self-contained breathing apparatus (SCBA). Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapours and decomposition products. Prevent run-off contaminating drains, sewers, or watercourses (bund if necessary); inform appropriate authorities immediately if product or run-off enters waterways.
HAZCHEM code:	2Z
Section 6: Accidental release measures	
Personal precautions:	Wear protective clothing (overalls buttoned at wrist and neck), respirator, chemical resistant gloves, boots and goggles. Evacuate unnecessary personnel from the area.
Environmental precautions:	Collect spill. Prevent chemical contaminating drains or waterways by activating emergency shut-off valves or using bunding. Inform appropriate authorities immediately if spill enters waterways or sewers. Prevent chemical contaminating soil.
Procedure for clean up:	Sweep up product carefully to avoid creating dust and place in appropriate labelled container for disposal at an approved site. If spray solution is spilt, bund spill or absorb with inert absorbent material such as sand or clay granules. Sweep absorbent material into an appropriate labelled container and dispose at an approved facility. Cover the area with water and absorb. Prevent runoff entering waterways or contaminating soil.
Section 7: Handling and storage	
Safe handling:	Read label before use. Wear personal protective equipment outlined in Section 8. Avoid generating dust. To be used only by suitably qualified person in compliance with HSNO Controls.

Blue Shield DF

Safe storage: Keep out of reach of children. Store in original container, tightly closed, in a dry, well ventilated place away from foodstuffs and animal feedstuffs. Storage must be in accordance with the current version of NZS 8409 Management of Agrichemicals.

Section 8: Exposure controls/personal protection

Occupational exposure limits:

<i>Ingredient</i>	<i>Form of exposure</i>	<i>WES-TWA</i>	<i>WES-STEL</i>
Copper (Cu), and its inorganic compounds	Respirable dust	0.01 mg/m ³	-

WorkSafe 14th edition of WES and BEI values, published November 2023.

Biological limit value: Not set

Engineering controls: Use only outdoors or in a well-ventilated area.

Respiratory protection: Do not breathe in dust or spray mist. Wear respirator fitted with particulate filter when mixing granules, and a half or full face respiratory when applying the spray solution.

Hand protection: Wear chemical resistant gloves.

Eye protection: Wear chemical goggles.

Skin protection: Wear overalls and boots.

General hygiene: Do not eat, drink or smoke while using. Wash hands and exposed skin thoroughly with soap and water before meals and after work. Wash protective clothing daily after work.

Section 9: Physical and chemical properties

- (a) Appearance: Blue-green granule.
- (b) Odour: Nonspecific.
- (c) Odour threshold: Not determined.
- (d) pH: 7.0 – 9.5 (1% aqueous)
- (e) Melting point/freezing point: Not determined.
- (f) Initial boiling point and boiling range: Not applicable.
- (g) Flash point: Not applicable.
- (h) Flammability (solid, gas): Non-flammable.
- (i) Upper/lower flammability or explosive limits: Non-flammable.
- (j) Vapour pressure: Not determined.
- (k) Vapour density: Not determined.
- (l) Relative density: Not available.

Blue Shield DF

(m)	Solubility:	Product disperses in water.
(n)	Partition coefficient: n-octanol/water:	Not available.
(o)	Auto-ignition temperature:	Not determined.
(p)	Decomposition temperature:	Not determined.
(q)	Kinematic viscosity:	Not applicable.
Section 10: Stability and reactivity		
Stability of the substance:		Stable under normal conditions of storage and use.
Conditions to avoid:		Temperatures over 125°C, extremes of temperature and direct sunlight. Exposure to high moisture.
Incompatible materials:		Acids, aluminium, ammonia.
Hazardous decomposition products:		Toxic and irritant gases and vapours, toxic metal oxide fumes.
Section 11: Toxicological information		
		Toxicity classifications determined by assessment of the components in the formulated mixture.
(i)	Acute toxicity:	Classified as harmful by oral exposure.
(ii)	Aspiration hazard:	Not classified as aspirant hazard.
(iii)	Respiratory irritation:	Dust may be mildly irritating to mucous membranes and respiratory tract.
(iv)	Skin corrosion / irritation:	Mild skin irritant.
(v)	Serious eye damage / irritation:	Corrosive. May damage eyes.
(vi)	Respiratory or skin sensitisation:	Classified as contact sensitizer.
(vii)	Germ cell mutagenicity:	Not classified for mutagenicity.
(viii)	Carcinogenicity:	
(ix)	Reproductive toxicity:	Not classified for carcinogenicity.
(x)	Specific organ toxicity:	Not classified for harm to fertility or unborn child. May cause damage to lungs from prolonged or repeated exposure by inhalation.
(xi)	Narcotic effects:	Not classified.
Toxicological information for copper hydroxide:		Oral LD ₅₀ (rat) 489 mg/kg bodyweight.

Blue Shield DF

Section 12: Ecological information

	Ecotoxicological classifications determined by assessment of the components in the formulated mixture.
(a) Aquatic toxicity:	Toxic to aquatic life and with long lasting effects.
(b) Terrestrial vertebrate toxicity:	Harmful to terrestrial vertebrates.
(c) Terrestrial invertebrate toxicity:	Not classified.
(d) Persistence and degradability:	Copper will not degrade and will be persistent in environment.
(e) Potential to be bioaccumulative:	Not identified as being bio accumulative.
(f) Mobility in soil:	No specific information available for formulation.
Ecotoxicological information for copper hydroxide:	Fathead minnow LC ₅₀ (96hr) 0.023 mg/L <i>Daphnia</i> spp EC ₅₀ (48hr) 0.0065 mg/L Oral LD ₅₀ (rat) 489 mg/kg bodyweight

Section 13: Disposal considerations

Product disposal:	Dispose of this product only by using according to the label or through Agrecovery chemical disposal or similar approved service or to an approved landfill.
Container disposal:	Recycle through Agrecovery if possible or appropriate recycling facility. Alternatively, crush and bury in an approved landfill. Do not use container for any other purpose. Avoid contamination of any water supply or stream with product or empty container.

Section 14: Transport information

UN number:	3077
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, N.O.S (CONTAINS 77% COPPER HYDROXIDE)
UN class:	9
Packing group:	III
Subsidiary risk:	-
HAZCHEM:	2Z
Environmental hazards:	Marine Pollutant
Special precautions:	-
	This product is classified as a Dangerous Good. Consult the Land Transport Rule: Dangerous Goods 2005 and NZS 5433:2012 Transport of Dangerous Goods on Land for more information

Section 15: Regulatory information

HSNO:	Approved substance under the HSNO Act 1996.
HSNO approval number:	HSR000739; Water dispersible granule or wettable powder containing 300 – 500 g/kg copper as copper hydroxide.

Blue Shield DF

Tolerable exposure limit / environmental exposure limit:	Not set.
HSNO controls:	See www.epa.govt.nz
Additional controls:	This substance must not be applied onto or into water.
ACVM:	Registered under the Agricultural Compounds Veterinary Medicines Act 1997.
ACVM registration number:	P4369
Conditions of registration:	See www.foodsafety.govt.nz

Section 16: Other information

Date of issue:	01/03/2024
Reason for reissue:	Update HSNO references, change hazardous classifications to GHS categories, and review of SDS content.
Replaces:	4 th March 2020
Information references:	Supplier Safety Data Sheet NZ EPA Approved hazardous substances with controls Workplace Exposure Standards and Biological Exposure Indices
Abbreviations:	ACVM: Agricultural Chemicals and Veterinary Medicines Group HSNO: Hazardous substances and New Organisms Act 1996 (HSNO Act) EPA: Environmental Protection Authority of New Zealand CAS Number: Chemical Abstracts Service Number LD50: Lethal Dose 50% (Population) LC50: Lethal Concentration 50% (Population) WES-TWA: Workplace exposure standards – Time-weighted average WES-STEL: Workplace exposure standards – Short-term exposure limit
Personal Protection Standards:	The following Standards provide general advice regarding safety clothing and equipment: Respiratory equipment: AS/NZS 1715 , Protective Gloves: AS 2161 , Occupational Protective Clothing: AS/NZS 4501 , Industrial Eye Protection: AS1336 and AS/NZS 1337 , Occupational Protective Footwear: AS/NZS2210

The data provided in this safety data sheet is based on current knowledge and experience. The purpose of this document is to describe the product in terms of its safety requirements. The above details do not imply any guarantee concerning composition, properties or performance of the product.