




Infosafe No™ 3NUCP	Issue Date : July 2024	ISSUED by NUFARMNZ
Product Name VITAFLO® 200		

Section 1 - Identification

Product Identifier	VITAFLO® 200
Product Code	03107
Product Type	Fungicide
Company Name	Nufarm NZ
Address	Central Park, Building 3, Level 4, 666 Great South Road Ellerslie Auckland 1051 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency Phone Number	0800 651 911
Email	nzinfo@nufarm.com
Recommended uses and any restrictions on use or supply	Controls the major seed borne and soil borne diseases in wheat, barley, oats and maize.
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.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture	Acute oral toxicity: Category 4 Acute inhalation toxicity: Category 4 Eye irritation Category 2 Skin sensitization: Category 1 Reproductive toxicity: Category 2 Specific target organ toxicity - repeated exposure: Category 2 Hazardous to the terrestrial environment: Hazardous to terrestrial vertebrates Hazardous to the aquatic environment acute Category 1 Hazardous to the aquatic environment chronic Category 1
Signal Word (s)	WARNING
Hazard Statement (s)	H302 Harmful if swallowed. H332 Harmful if inhaled. H319 Causes serious eye irritation. H317 May cause an allergic skin reaction. H361 Suspected of damaging fertility or the unborn child. H373 May cause heart or cardiovascular damage through prolonged or repeated exposure. H410 Very toxic to aquatic life with long lasting effects. H433 Harmful to terrestrial vertebrates.
Precautionary Statement – General	P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P103 Read carefully and follow all instructions.
Pictogram (s)	Exclamation mark, Health hazard, Environment
	  
Precautionary Statement – Prevention	P202 Do not handle until all safety precautions have been read and understood. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P264 Wash hands and face thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing should not be allowed out of the workplace.

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Precautionary Statement – Response	<p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.</p> <p>P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P312 Call a POISON CENTER/doctor if you feel unwell.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P321 Specific treatment (see on this label).</p> <p>P330 Rinse mouth.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p> <p>P405 Store locked up.</p>
Precautionary Statement – Storage	
Precautionary Statement – Disposal	<p>P501 Dispose of contents/container to an approved landfill.</p>

Section 3 - Composition and Information on Ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Carboxin	5234-68-4	200 g/L
	Thiram	137-26-8	200 g/L

Section 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	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance.
First-aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically.

Section 5 - Firefighting Measures

Suitable Extinguishing Media	Water fog, foam, carbon dioxide or dry chemical.
Hazards from Combustion Products	If involved in a fire, it may emit toxic fumes of phosgene, hydrogen chloride and oxides of nitrogen.
Special protective equipment for fire-fighters	Full protective clothing and self-contained breathing apparatus.

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Specific Methods	Do not allow washings to reach sewage or effluent systems. Keep up wind.
Hazchem Code	2X
Decomposition Temperature	Information is not available.
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

Section 6 - Accidental Release Measures

Spills and 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.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Environmental Precautions	Prevent from entering drains, waterways or sewers.

Section 7 - Handling and Storage

Precautions for Safe Handling	Do not handle until all safety precautions have been read and understood. The person mixing or applying VITAFLO 200 must be a 'Qualified Contractor' or a 'Qualified Person'. The spray mixture may also be prepared by a 'Qualified Loader'. It is the duty of the PCBU that a person who uses, handles, manufactures or stores a hazardous substance (including hazardous waste) is provided information, instruction and training in accordance with Regulation 4.5 of the Health and Safety at work (Hazardous Substances) Regulations 2017. Avoid skin and eye contact and inhalation of spray mist. This product must not be applied onto or into water. CERTIFIED HANDLER: Is not required. TRACKING: Is not required. RECORD KEEPING: Is not required.
Conditions for safe storage, including any incompatibilities	Keep out of reach of children. Stores containing 100L of Vitaflo 200 require secondary containment and are subject to signage, and more than 100L require emergency response plans. 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.
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.

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limits (OEL)	No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product. WES TWA for thiram = 1mg/m ³
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, 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.

Section 9 - Physical and Chemical Properties

Form	Liquid
Appearance	Red-purple liquid.

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Odour	Faint odour.
Decomposition Temperature	Information is not available.
Melting Point	91-92°C for active ingredient carboxin. 144-146°C for active ingredient thiram.
Solubility in Water	Negligible.
Specific Gravity	1.14g/mL @ 20°C
pH	7
Vapour Pressure	0.020mPa (25°C) for active ingredient carboxin. 2x10 ⁻² mPa (25°C) for active ingredient thiram.
Vapour Density (Air=1)	Information is not available.
Odour Threshold	Information is not available.
Partition Coefficient: n-octanol/water	Kow logP = 2.3 for active ingredient carboxin. Kow logP = 2.1 for active ingredient thiram.
Flash Point	Information is not available.
Flammability	Information is not available.
Auto-ignition Temperature	Information is not available.
Flammable Limits - Lower	Information is not available.
Flammable Limits - Upper	Information is not available.
Initial Boiling Point and Boiling Range	Information is not available.
Kinematic Viscosity	Information is not available.
Particle Characteristics	Information is not available.
Relative Density	1.45 for active ingredient carboxin. 1.36 (20°C) for active ingredient thiram.
Other Information	(SC) Suspension Concentrate

Section 10 - Stability and Reactivity

Chemical Stability	Stable under normal conditions of handling and storage.
Conditions to Avoid	Will thicken irreversibly with heat. May deteriorate on prolonged exposure to heat, air or moisture.
Incompatible Materials	Strong acids and alkalis. Not compatible with oxidizers.

Section 11 - Toxicological Information

Toxicology Information	No specific toxicological data is available for this product. Data below is for constituents.
Acute Toxicity - Oral	LD50 (rats) 2,864mg/kg for active ingredient carboxin. LD50 (rabbit) 210mg/kg for active ingredient thiram.
Acute Toxicity - Inhalation	LC50 (rats) >4.7mg/L/4h for active ingredient carboxin. LC50 (rats, female) 3.46mg/L/4h for active ingredient thiram.
Acute Toxicity - Dermal	LD50 (rabbits) >4000mg/kg for active ingredient carboxin. LD50 (rats) >2000mg/kg for active ingredient thiram.
Skin Corrosion/Irritation	Both active ingredients carboxin and thiram are non-irritating to skin.
Serious Eye Damage/Irritation	Active ingredient thiram is a moderate eye irritant.

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Skin Sensitisation	Active ingredient thiram is a skin sensitiser (guinea pigs).
Germ Cell Mutagenicity	Information is not available.
Carcinogenicity	Information is not available.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
STOT - Single Exposure	Information is not available.
STOT - Repeated Exposure	Repeated oral exposure at high doses may damage the heart and cardiovascular system.
Aspiration Hazard	Information is not available.
Other Information	The Australian Acceptable Daily Intake (ADI) for carboxin for a human is 0.08 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 8.5 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of APVMA, 'ADI List', Edition 1/2024). The Australian Acceptable Daily Intake (ADI) for thiram for a human is 0.004 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.4 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of APVMA, 'ADI List', Edition 1/2024).

Section 12 - Ecological Information

Persistence and Degradability	Soil DT50 <1d (20°C) for active ingredient carboxin. DT50(aerobic) 4.8d (20°C, mean 4 soils) for active ingredient thiram.
Mobility	Information is not available.
Bioaccumulative Potential	Thiram and carboxin are not bioaccumulative.
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 (96h) rainbow trout 2.3, bluegill sunfish 3.6mg/L for active ingredient carboxin. LC50 (96h) bluegill sunfish 1.3, rainbow trout 0.046mg/L for active ingredient thiram.
Acute Toxicity - Daphnia	EC50 (48h) >57mg/L for active ingredient carboxin. LC50 (48h) 0.011mg/L for active ingredient thiram.
Acute Toxicity - Algae	EC50 (5d) Pseudokirchneriella subcapitata 0.48mg/L for active ingredient carboxin. EC50 (72h) Selenastrum capricornutum 0.065mg/L for active ingredient thiram.
Acute Toxicity - Other Organisms	LD50 (oral and contract) >100µg/bee for both active ingredients carboxin and thiram.

Section 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 seed treatment machine. Recycle empty container. Otherwise crush and bury in a suitable landfill.

Section 14 - Transport Information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
UN Number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (carboxin and thiram)
Hazard Class	9
Hazchem Code	2X

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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.

Section 15 - Regulatory Information

National and or International Regulatory Information	Registered pursuant to the ACVM Act 1997, No. P2694 See www.foodsafety.govt.nz for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR000476 See www.epa.govt.nz for approval controls.
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Section 16 - Any Other Relevant Information

Date of preparation or last revision of SDS	September 2022.
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
Revisions Highlighted	Various changes and updates made to the document to comply with GHS7. ...End Of MSDS...

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