



Infosafe No™ 3NUCP Issue Date :September 2008 ISSUED by NUFARMNZ CS: 1.4.21

Product Name **VITAFLO® 200**

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** VITAFLO® 200  
**Product Code** 03107  
**Product Type** Fungicide  
**Company Name** Nufarm NZ  
**Address** 6 Manu Street, Otahuhu  
Auckland 2024 New Zealand  
**Emergency Tel.** 0800 651 911  
**Telephone/Fax Number** Tel: 0-9-270 4157  
Fax: 0-9-270 4159  
**Email** www.nufarm.co.nz  
**Recommended Use** 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.

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** Classified as Dangerous Goods according to the LTSA New Zealand.  
**Risk Phrase(s)**  
**Other Information** 6.1D acute toxicant, 6.3B skin irritant, 6.4A eye irritant, 6.5B sensitiser, 6.9B target organ toxicant, 9.1A aquatic toxicant, 9.3C terrestrial vertebrate toxicant,  
TOXICITY  
Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause eye irritation. May cause skin irritation or sensitisation from prolonged skin contact. May cause damage to the heart, kidneys and cardiovascular system from repeated oral exposure at high doses.  
ECOTOXIC  
Very toxic to aquatic organisms.  
Harmful to terrestrial vertebrates.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical** Liquid  
**Characterization**  

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Carboxin	5234-68-4	200g/L
	Thiram	137-26-8	200g/L
	Ethylene glycol	107-21-1	50g/L

## 4. FIRST AID MEASURES

**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.



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## 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Water fog, foam, carbon dioxide or dry chemical.
<b>Hazards from Combustion</b>	If involved in a fire, it may emit toxic fumes of phosgene, hydrogen chloride and oxides of nitrogen.
<b>Products</b>	
<b>Special Protective Equipment for fire fighters</b>	Full protective clothing and self-contained breathing apparatus.
<b>Specific Methods</b>	Keep up wind. Do not allow washings to reach sewage or effluent systems.
<b>Hazchem Code</b>	2X
<b>Other Information</b>	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

## 6. ACCIDENTAL RELEASE MEASURES

<b>Spills &amp; Disposal</b>	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.
<b>Personal Protection</b>	For appropriate personal protective equipment (PPE), refer Section 8.
<b>Environmental Precautions</b>	Prevent from entering drains, waterways or sewers.

## 7. HANDLING AND STORAGE

<b>Precautions for Safe Handling</b>	Avoid skin and eye contact. APPROVED HANDLER: This product must be under the control of an approved handler during use. TRACKING: Is not required
<b>Conditions for Safe Storage</b>	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 Vitaflo 200 require secondary containment and are subject to signage, and more than 100L require emergency response plans.
<b>Other Information</b>	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

<b>National Exposure Standards</b>	No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product. WES TWA for thiram = 1mg/m <sup>3</sup> WES TWA for ethylene glycol vapour and mists = Ceiling 50ppm (127mg/m <sup>3</sup> )
<b>Engineering Controls</b>	Handle in well ventilated areas, generally natural ventilation is adequate.
<b>Personal Protective Equipment</b>	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.
<b>Hygiene Measures</b>	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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Form</b>	Liquid
<b>Physical and Chemical Properties</b>	Red-purple liquid with faint odour
<b>Solubility in Water</b>	Negligible



# Material Safety Data Sheet

CS: 1.4.21

Page: 3 of 4

Infosafe No™ 3NUCP Issue Date :September 2008 ISSUED by NUFARMNZ CS: 1.4.21

Product Name **VITAFLO® 200**

**Specific Gravity** 1.14g/mL @ 20°C  
**pH Value** 7 - 9  
**Other Information** (SC) Suspension Concentrate

## 10. STABILITY AND REACTIVITY

**Chemical Stability** When stored appropriately this product should show no significant degradation for 5 years from the date of manufacture.  
**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.

## 11. TOXICOLOGICAL INFORMATION

**Toxicology Information** No specific toxicological data is available for this product. Data below is for constituents.  
**Acute Toxicity - Oral** LD50 (rabbit) 210mg/kg for thiram  
LD50 (rat) 3820mg/kg for carboxin  
**Acute Toxicity - Inhalation** LC50 (rat) 0.5mg/L/4h for thiram  
**Eye Irritation** Irritating to eyes (thiram and carboxin)  
**Skin Irritation** Irritating to skin (thiram)  
**Respiratory Irritation** Irritating (thiram)  
**Skin Sensitisation** Sensitising (guinea pig) for thiram  
**Subchronic/Chronic Toxicity** Target organ - cardiovascular system (thiram)  
LOAEL (rat) 20.4mg/kg bw/day  
**Other Information** 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: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', December 2007).  
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: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', Decembe 2007).

## 12. ECOLOGICAL INFORMATION

**Persistence / Degradability** Thiram is persistent  
**Environmental Fate** Thiram: In animals the main metabolites formed are carbonyl sulphide and carbon disulphide.  
The half life of thiram in soil and water is 0.5 days (sandy soil, pH 6.7).  
Carboxin: In animals the principle metabolic pathway in rats and rabbits was o- or r- hydroxylation, followed by glucuronidation.  
In plants, undergoes oxidation to the sulfoxide, but not further to the sulfone.  
Soil/environment: DT50 in soil c. 24h. Koc 373.  
**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) carp 0.3µg/L for thiram  
LC50 (96h) bluegill sunfish 1.2mg/L for carboxin  
**Acute Toxicity - Algae** EC50 (5d) Selenastrum capricornutum 0.46ppm for thiram  
EC50 (96h) Chlorella 2.4mg/L for carboxin  
**Acute Toxicity - Other Organisms** LC50 (96h) mysid 3.36ppb for thiram

## 13. DISPOSAL CONSIDERATIONS

**Product Disposal** Dispose of product only by using according to the label, or at an approved



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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.

## 14. TRANSPORT INFORMATION

**Transport Information** It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.  
**U.N. Number** 3082  
**Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (thiram 20%)  
**DG Class** 9  
**Hazchem Code** 2X  
**Packaging Method** -  
**Packing Group** III  
**EPG Number** -  
**IERG Number** 47  
**IMO Marine Pollutant** Yes. Marine Pollutant 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. P2694  
See [www.nzfsa.govt.nz/acvm/](http://www.nzfsa.govt.nz/acvm/) for registration conditions  
Approved pursuant to the HSNO Act 1996, Approval Code HSR000476  
See [www.ermanz.govt.nz](http://www.ermanz.govt.nz) for approval controls  
**Packaging & Labelling** HARMFUL \* ECOTOXIC - keep out of reach of children  
**Hazard Rating Systems** NFPA/HMIS: 2-1-1

## 16. OTHER INFORMATION

**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** Increased shelflife. Recycle statement in disposal section.  
**Other Information** Supersedes SDS issued April 2007  
...End Of MSDS...

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