

Infosafe No™ 3NUG0	Issue Date : January 2017	APPROVED by NUFARMNZ
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 Product Name **CAPTAN 600 FLO**

## 1. Identification

<b>GHS Product Identifier</b>	CAPTAN 600 FLO
<b>Product Code</b>	02843
<b>Product Type</b>	Fungicide
<b>Company Name</b>	Nufarm NZ
<b>Address</b>	6 Manu Street, Otahuhu Auckland 2024 New Zealand
<b>Telephone/Fax Number</b>	Tel: 0-9-270 4150 Fax: 0-9-270-4159
<b>Emergency phone number</b>	0800 651 911
<b>Email</b>	info@nz.nufarm.com
<b>Recommended use of the chemical and restrictions on use</b>	A fungicide for the control of certain fungous diseases of fruit, vegetables, ornamentals, turf, greenhouse crops and for certain soil borne diseases.
<b>Other Information</b>	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

<b>Other Information</b>	6.1D acute toxicant, 6.5B sensitiser, 6.7B possible carcinogen, 8.3A eye corrosive, 9.1A aquatic toxicant, TOXICITY Harmful - may be harmful if swallowed, inhaled or absorbed through the skin. May cause sensitisation from prolonged skin contact. Limited evidence of a carcinogenic effect in animal studies. CORROSIVE Danger - this product is corrosive and may cause eye damage. ECOTOXIC Very toxic to aquatic organisms.
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## 3. Composition/information on ingredients

<b>Chemical Characterization</b>	Liquid		
<b>Ingredients</b>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Captan	133-06-2	600 g/L
	Ingredients determined to be non-hazardous	-	10-30 %
	Water		To volume

## 4. First-aid measures

<b>First Aid Measures</b>	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.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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.
<b>Skin</b>	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.
<b>Eye contact</b>	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance. Remove contact lenses, if present and easy to do.
<b>First Aid Facilities</b>	Facilities storing or utilizing this material should be equipped with an

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**Advice to Doctor**      eyewash facility and safety shower.  
There is no specific antidote if ingested. Inhalation may cause lung oedema. Check for possible mucosal damage before performing gastric lavage. Treat central nervous system effects symptomatically. Contamination of eyes may require specialised ophthalmologic attention.

## 5. Fire-fighting measures

**Suitable extinguishing media**      Water fog, foam, carbon dioxide or dry chemical.

**Unsuitable**      Do not use water in a jet.

**Extinguishing Media**

**Hazards from Combustion**      Hazardous thermal decomposition products may include but not limited to: Oxides of sulphur, nitrogen and carbon; thiocarbonyl chloride, and hydrochloric acid.

**Products**

**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**      2Z

**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.

**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 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.  
Do NOT apply onto or into water.

**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 CAPTAN 600 FLO 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 captan = 5mg/m<sup>3</sup>

**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, a NIOSH approved half face mask with organic vapour cartridge + dust/mist prefilter. cotton overalls buttoned to the neck and wrist, and boots.

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<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.
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## 9. Physical and chemical properties

<b>Form</b>	Liquid
<b>Appearance</b>	Off white viscous liquid
<b>Solubility in Water</b>	captan = 3.3mg/L @ 25°C
<b>Specific Gravity</b>	1.27g/mL
<b>pH</b>	2.5 - 7.0 (1% aqueous solution)
<b>Vapour Pressure</b>	Not determined (captan = <1.3mPa @ 25°C)
<b>Flammability</b>	Not flammable
<b>Other Information</b>	(SC) Suspension Concentrate

## 10. Stability and reactivity

<b>Chemical Stability</b>	Stable under normal conditions of handling and storage.
<b>Conditions to Avoid</b>	Captan is slowly hydrolysed at neutral pH and rapidly in alkali. Avoid open flame or other high temperature sources that might induce thermal decomposition.
<b>Incompatible Materials</b>	Avoid alkaline materials such as lime, Bordeaux mixture or lime sulphur and oils.
<b>Possibility of hazardous reactions</b>	Keep away from strong oxidising agents.
<b>Hazardous Polymerization</b>	Hazardous polymerisation will not occur.
<b>Other Information</b>	Non-corrosive (but captan's decomposition products are corrosive). Thermal half life = >4 years @ 80°C, 14.2 days @ 120°C).

## 11. Toxicological Information

<b>Acute Toxicity - Oral</b>	LD50 (rat) 9,000 mg/kg for captan technical
<b>Acute Toxicity - Dermal</b>	LD50 (rabbit) >4,500 mg/kg for captan technical
<b>Acute Toxicity - Inhalation</b>	LC50 (rat) (4hr) 0.688 mg/L for captan technical
<b>Ingestion</b>	May cause irritation to mouth and throat. Symptoms may include nausea and vomiting.
<b>Inhalation</b>	May irritate the respiratory tract.
<b>Skin</b>	Irritant. May cause sensitisation by skin contact.
<b>Eye</b>	Corrosive to ocular tissue (Captan)
<b>Skin Sensitisation</b>	May cause skin sensitization.
<b>Carcinogenicity</b>	Safe Work Australia has classified captan in the occupational environment as a Carcinogen Category 3 substance. This means that the substance is not classifiable as to carcinogenicity to humans. IARC (International Agency for Research on Cancer) has determined that the mechanism in rats and mice is unlikely to occur in humans; hence captan has been classified by IARC as Cat 3, not classifiable as to carcinogenicity to humans. The US EPA considers captan not likely to be a human carcinogen at levels that do not cause cytotoxicity and regenerative cell hyperplasia, therefore not likely to be a human carcinogen or pose cancer risks of concern when used in accordance with approved product labels.
<b>Health Hazard</b>	Symptoms of over exposure may include, nausea, diarrhoea, difficulty in breathing, tearing of eyes, irritability, reduced urine production and possibly death on ingestion. Possible risks of irreversible effects.
<b>Chronic Effects</b>	Captan is non-mutagenic (in-vivo), non-teratogenic and has no observed reproductive hazards. Repeat skin exposure may lead to contact dermatitis. Experimental animal trials using captan suggest carcinogenic potential (in

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<b>Serious eye damage/irritation</b>	mice only) at very high does of captan (>1,000ppm) Corrosive (rabbit) for captan technical
<b>Skin corrosion/irritation</b>	Irritant (rabbit) for captan technical
<b>Other Information</b>	The Australian Acceptable Daily Intake (ADI) for captan for a human is 0.1 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 10 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', March 2013).

## 12. Ecological information

<b>Persistence and degradability</b>	Rapidly biodegraded within a few days especially in wet conditions. TD50 c. 1 day (25°C, pH7.2, organic matter 1.2%)
<b>Mobility</b>	Captan does not leach to ground water
<b>Environmental Fate</b>	In mammals, the three chlorine atoms are cleaved under the influence of cellular sulphhydryl compounds. Trithiocarbamate, thiophosgene, and tetrahydrophthalimide are formed.
<b>Bioaccumulative Potential</b>	Captan does not bioaccumulate in aquatic organisms.
<b>Basis for Assessment</b>	Ecotoxicological data have not been determined specifically for this product. Data below is for the active ingredient unless otherwise stated.
<b>Acute Toxicity - Fish</b>	LC50 (96h): Brown trout = 0.0262mg/L for captan technical
<b>Acute Toxicity - Daphnia</b>	LC50 (48hr) for daphnia is 7-10 mg/L for captan technical.
<b>Acute Toxicity - Other Organisms</b>	LD50 (contact) 788µg/bee; (oral) 91µg/bee. LD50: Bobwhite quail = 2,000-4,000mg/kg

## 13. Disposal considerations

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

## 14. Transport information

<b>Transport Information</b>	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
<b>U.N. Number</b>	3082
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (captan, 60%)
<b>Transport hazard class(es)</b>	9
<b>Hazchem Code</b>	2Z
<b>Packaging Method</b>	-
<b>Packing Group</b>	III
<b>EPG Number</b>	-
<b>IERG Number</b>	47
<b>IMO Marine Pollutant</b>	Yes. Environmentally Hazardous Substance mark required.
<b>Other Information</b>	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

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<b>National and or International Regulatory Information</b>	Registered pursuant to the ACVM Act 1997, No. P7654 See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR007770 See <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> for approval controls.
<b>Packaging &amp; Labelling</b>	HARMFUL * CORROSIVE * ECOTOXIC - keep out of reach of children
<b>Hazard Rating</b>	NFPA/HMIS: 3-1-1
<b>Hazard Category</b>	HARMFUL * CORROSIVE * ECOTOXIC - Keep out of reach of children

## 16. Other Information

**Date of preparation or last revision of SDS** September 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  
Hazchem code has been changed from 2X to 2Z.

**Revisions Highlighted**

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