



# Material Safety Data Sheet

Page: 1 of 5

Infosafe No. 3NU88 Issue Date : May 2007 ISSUED by NUFARM

Product Name : **SPIN FLO Systemic Fungicide**

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** SPIN FLO Systemic Fungicide  
**Product Code** 5810  
**Product Type** Group A Fungicide  
**Company Name** NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)  
**Address** 103-105 Pipe Road Laverton North  
Victoria 3026 Australia  
**Emergency Tel.** 1800 033 498 (24hr Australia)  
**Telephone/Fax Number** Tel:  
+61 3 9282-1000  
Fax:  
+61 3 9282-1001  
**Recommended Use** A broad spectrum, systemic fungicide for the control of fungal diseases in various crops as per the Directions for Use table on the label.  
**Other Information** This MSDS 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** HAZARDOUS SUBSTANCE.  
NON-DANGEROUS GOODS.  
Hazard classification according to the criteria of NOHSC.  
Dangerous goods classification according to the Australia Dangerous Goods Code.  
**Risk Phrase(s)** R46(2) May cause heritable genetic damage.  
R60(2) May impair fertility.  
R61(2) May cause harm to the unborn child  
**Safety Phrase(s)** S13 Keep away from food, drink and animal feeding stuffs.  
S2 Keep out of reach of children.  
S45 In case of accident or if you feel unwell seek medical advice immediately  
S53 Avoid exposure - obtain special instructions before use.  
**Other Information** Poisons Schedule S6

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Characterization** Liquid

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Carbendazim	10605-21-7	500 g/L
	Water		30-60 %
	Other ingredients (considered non-hazardous)		10-30 %

## 4. FIRST AID MEASURES

**Inhalation** Over-exposure by inhalation is improbable. Check for other causes of observed symptoms and seek medical advice.  
**Ingestion** Rinse mouth and then drink plenty of water.  
If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.  
**Skin** Wash affected areas thoroughly with soap and water.  
Remove contaminated clothing and launder before re-use.  
If irritation persists, seek medical advice.



# Material Safety Data Sheet

Page: 2 of 5

Infosafe No. 3NU88 Issue Date : May 2007 ISSUED by NUFARM

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**Eye** If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.  
Seek medical advice.

**First Aid Facilities** If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.

**Advice to Doctor** Treat symptomatically.

## 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.

**Hazards from Combustion Products** If involved in a fire, the dehydrated components may emit oxides of carbon and oxides of nitrogen.

**Special Protective Equipment for fire fighters** Breathable air apparatus should be worn when fighting a fire in which this product is involved.

**Specific Hazards** Considered low risk due to water content, however upon evaporation of water the product is combustible.

**Hazchem Code** 2X

## 6. ACCIDENTAL RELEASE MEASURES

**Spills & Disposal** Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite).  
Collect spilled material and waste in sealable open-top type containers for disposal.  
If possible, ring 1800 033 498 for specialist advice.

**Personal Protection** For appropriate personal protective equipment (PPE), refer Section 8.  
If product has dried out and the possibility of dust generation exists, wear a suitable respirator.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers.

**Conditions for Safe Storage** Store in the closed, original container in a cool, well ventilated area.  
Do not store for prolonged periods in direct sunlight.

**Other Information** Always read the label and any attached leaflet before use.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** No exposure standards have been set for this product or the active ingredients.

**Engineering Controls** Handle in well ventilated areas, generally natural ventilation is adequate.

**Personal Protective Equipment** When opening the container, preparing product for use and using the prepared product, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), a washable hat, elbow-length PVC gloves, goggles and a half face piece respirator.  
Re-entry period: Do not enter treated area until spray has dried.  
Note: Use of a respirator is recommended by the APVMA to protect against chronic (long term exposure) effects.

**Hygiene Measures** After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.  
After each day's use, wash contaminated clothing and safety equipment.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form** Liquid

**Appearance** White to grey liquid suspension

**Odour** Faint odour



# Material Safety Data Sheet

Page: 3 of 5

Infosafe No. 3NU88 Issue Date : May 2007 ISSUED by NUFARM

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**Solubility in Water** Disperses in water.  
**Specific Gravity** 1.15  
**pH Value** 6.0 - 8.5  
**Vapour Pressure** 0.15 mPa @ 25°C for Carbendazim  
**Volatile Component** ~46%  
**Octanol/Water Partition Coefficient** Kow Log P is 1.51 (pH7, Carbendazim)  
**Flammability** Non combustible material.  
**Other Information** pKa is 4.2 (weak base)

## 10. STABILITY AND REACTIVITY

**Chemical Stability** Stable under normal conditions.

## 11. TOXICOLOGICAL INFORMATION

**Toxicology Information** No harmful effects are expected if the precautions on the label and this MSDS are followed.

**Inhalation** Not a likely route of exposure.  
Inhalation of sprays or mists may result in effects described under ingestion.

**Ingestion** Possible symptoms of exposure of the concentrate include: nausea, vomiting, diarrhoea and headache.

**Skin** May irritate the skin.

**Eye** May irritate the eyes.

**Chronic Effects** Evidence from animal studies indicate that repeated or prolonged exposure to carbendazim can result in damage to the liver, kidneys and thymus.

**Reproductive Toxicity** Overexposure or misuse of carbendazim may interfere with fertility and may cause adverse effects on embryo, including malformations, as the result of affecting chromosomes during cell division.  
The APVMA has issued the following warning:  
'Contains carbendazim which causes birth defects in laboratory animals. Women of childbearing age should avoid contact with carbendazim'.

**Mutagenicity** The weight of evidence indicates that carbendazim does present a mutagenic risk.

**Carcinogenicity** The weight of the evidence is that carbendazim is not carcinogenic.

**Acute Toxicity - Oral** LD50 (rat) >5000 mg/kg for a similar formulation

**Acute Toxicity - Dermal** LD50 (rat) >2000 mg/kg for a similar formulation

**Acute Toxicity - Inhalation** LC50 (rat) (4hr) >5.2 mg/l for a similar formulation

**Eye Irritation** Not an eye irritant.

**Skin Irritation** Not a skin irritant.

**Skin Sensitisation** Product is not a skin sensitiser.

**Other Information** The Australian Acceptable Daily Intake (ADI) for carbendazim for a human is 0.03 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 2.5 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, 'ADI List', TGA, September 2006).

## 12. ECOLOGICAL INFORMATION

**Persistence / Degradability** Average soil half life of carbendazim is 6 - 12 months.

**Known Harmful Effects on the Environment** The product is a marine pollutant for sea transport.



# Material Safety Data Sheet

Page: 4 of 5

Infosafe No. 3NU88 Issue Date : May 2007 ISSUED by NUFARM

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**Environ. Protection** Spray drift can cause damage, read the label for more information.

**Acute Toxicity - Fish** Toxic to fish. LC50 (96hr) for rainbow trout is 0.87 mg/l.

**Acute Toxicity - Daphnia** EC50 (48hr) for daphnia is 0.22 mg/l for carbendazim.

**Acute Toxicity - Other Organisms** Birds: Not toxic to birds. LD50 for quail is 5862 - 15595 mg/kg  
Bees: Not toxic to bees. LD50 >50 µg/bee.

## 13. DISPOSAL CONSIDERATIONS

**Product Disposal** On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).

Unused or spent dip should be disposed of carefully to avoid contamination of streams, rivers or waterways. Dispose of dip by pouring evenly into a limed disposal pit, specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Alternatively, spray onto grassed areas where runoff to waterways, leaching to ground water or grazing by animals will not occur.

**Container Disposal** Do not use this container for any other purpose. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMuster symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

## 14. TRANSPORT INFORMATION

**U.N. Number** None Allocated

**Proper Shipping Name** None Allocated

**DG Class** None Allocated

**Hazchem Code** 2X

**Packing Group** None Allocated

**Storage and Transport** Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

**UN Number (Sea Transport)** 3082

**IMO Class/Packing Group** Class 9; Packing Group III

**IMO Proper Shipping Name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Carbendazim)

## 15. REGULATORY INFORMATION

**Poisons Schedule** S6

**Packaging & Labelling** POISON  
KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING



# Material Safety Data Sheet

Page: 5 of 5

Infosafe No.	3NU88	Issue Date : May 2007	ISSUED by NUFARM
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**Hazard Category** Toxic

**AICS (Australia)** All of the components in this product are listed on the Australian Inventory of Chemical Substances.

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## 16. OTHER INFORMATION

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**Contact Person/Point** Normal Hours: Mr Volker Maier Phone: +61 3 9282 1000  
After Hours: Shift Supervisor Phone: 1800 033 498

**Revisions Highlighted** The MSDS was reviewed. Changes made to sections:  
8 - Personal Protection Equipment, and  
11 - Reproductive Toxicity.  
Minor updates in other areas.  
...End Of MSDS...