SAFETY DATA SHEET

NUFARM SPIN FLO FUNGICIDE

Infosafe No.: 3NU88
ISSUED Date : 27/01/2023
ISSUED by: NUFARM AUSTRALIA LIMITED.

Section 1 - Identification

Product Identifier
NUFARM SPIN FLO FUNGICIDE

Product Code
5810

Product Type
Group 1 Fungicide

Company Name
NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)

Address
103-105 Pipe Road Laverton North
Victoria 3026 AUSTRALIA

Telephone/Fax Number
Tel: +61 3 9282-1000
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Emergency Phone Number
1800 033 498 (24hr Australia)

Emergency Contact Name
www.nufarm.com.au

E-mail Address
SDSANZ@nufarm.com

Recommended use of the chemical and restrictions on 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.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture
Classified as Hazardous according to the Globally Harmonised System of Classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.
Complies with the requirements of Special Provision AU01 and therefore exempted from being classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)
Classified as Dangerous Goods according to International Maritime Dangerous Goods Code (IMDG) and International Air Transport Association (IATA).

Germ cell mutagenicity: Category 1B
Reproductive toxicity: Category 1B
Hazardous to the Aquatic Environment - Acute Hazard: Category 1
Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1

Signal Word (s)
DANGER

Hazard Statement (s)
H340 May cause genetic defects.
H360 May damage fertility or the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s)
Health hazard,Environment

Precautionary Statement–Prevention
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Precautionary Statement–Response
P308+P313 IF exposed or concerned: Get medical advice/attention.
P391 Collect spillage.

Precautionary Statement–Storage
P405 Store locked up.

Precautionary Statement–Disposal
P501 Dispose of contents/container to an approved waste disposal plant.

Section 3 - Composition and Information on Ingredients

Ingredients

Name	CAS	Proportion
Carbendazim	10605-21-7	500 g/L
Water		30-60 %
Ingredients determined not to be hazardous		10-30 %

Section 4 - First Aid Measures

Inhalation
If inhaled, remove affected person from contaminated area. Keep at rest until recovered. If symptoms develop and/or persist seek medical attention.

Ingestion
Do not induce vomiting. Wash out mouth thoroughly with water. Seek medical attention.

Skin
Wash affected area thoroughly with soap and water. If symptoms develop seek medical attention.

Eye
If in eyes, hold eyelids apart and flush the eyes continuously with running water. Remove contact lenses. Continue flushing for several minutes until all contaminants are washed out completely. If symptoms develop and/or persist seek medical attention.

First Aid Facilities
Eyewash and normal washroom facilities.

Advice to Doctor
Treat symptomatically.

Other Information
For advice in an emergency, contact a Poisons Information Centre (Phone Australia 131 126) or a doctor at once.

Section 5 - Firefighting Measures

Suitable Extinguishing Media
Use appropriate fire extinguisher for surrounding environment.

Hazards from Combustion Products
Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

Specific hazards arising from the chemical
This product is non combustible. However, following evaporation of aqueous component under fire conditions, the non-aqueous component may decompose and/or burn.

Hazchem Code
•3Z

Decomposition Temperature
Not available

Precautions in connection with Fire
Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) operated in positive pressure mode and full protective clothing to prevent exposure to vapours or fumes. Water spray may be used to cool down heat-exposed containers. Fight fire from safe location. This product should be prevented from entering drains and watercourses.

Other Information
Stop fire water from entering drains or water bodies.

Section 6 - Accidental Release Measures

Emergency Procedures
Wear appropriate personal protective equipment and clothing to prevent exposure. Increase ventilation. If possible contain the spill. Place inert absorbent material onto spillage. Collect the material and place into a suitable labelled container. Do not dilute material but contain. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water and waste management authorities in accordance with local regulations. As a water based product, if spilt on electrical equipment the product will cause short-circuits.

Section 7 - Handling and Storage

Precautions for Safe Handling
Always read the label and any attached leaflet before use.

Avoid inhalation of vapours and mists, and skin or eye contact. Use only in a well ventilated area. Keep containers sealed when not in use. Prevent the build up of mists or vapours in the work atmosphere. Maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Avoid exposure. Do not handle until all safety precautions have been read and understood. It is recommended that pregnant or breastfeeding women should not handle this product unless adequate exposure protection can be assured at all times. Female personnel planning pregnancy should be made aware of the potential risks.

Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well-ventilated area, out of direct sunlight. Store in suitable, labelled containers. Keep containers tightly closed. Store away from incompatible materials. Ensure that storage conditions comply with applicable local and national regulations. Protect from freezing.

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limit values
No exposure standards have been established for the mixture. However, over-exposure to some chemicals may result in enhancement of pre-existing adverse medical conditions and/or allergic reactions and should be kept to the least possible levels.

Biological Monitoring
No biological limits allocated.

Control Banding
Not available

Engineering Controls
This substance is hazardous and should be used with a local exhaust ventilation system, drawing vapours away from workers' breathing zone. If the engineering controls are not sufficient to maintain concentrations of vapours/mists below the exposure

standards, suitable respiratory protection must be worn.

Re-entry period: Do not enter treated area until spray has dried.

Respiratory Protection
If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable vapor/mist filter should be used. Refer to relevant regulations for further information concerning respiratory protective requirements.
Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and Maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices, in order to make any necessary changes for individual circumstances.

Eye and Face Protection
Safety glasses with side shields, chemical goggles or full-face shield as appropriate should be used. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to relevant regulations. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 (series) - Eye Protectors for Industrial Applications.

Hand Protection
Wear gloves of impervious material such as elbow-length PVC gloves. Final choice of appropriate gloves will vary according to individual circumstances. i.e. methods of handling or according to risk assessments undertaken. Occupational protective gloves should conform to relevant regulations.
Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Thermal Hazards
No further relevant information available.

Body Protection
Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist is recommended. Chemical resistant apron is recommended where large quantities are handled.

Requirements Concerning Special Training
Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

Section 9 - Physical and Chemical Properties

Properties	Description	Properties	Description
Form	Liquid	**Appearance**	White to grey liquid suspension
Colour	White/Grey	**Odour**	Faint odour
Melting Point	Not available	**Boiling Point**	Not available
Decomposition Temperature	Not available	**Solubility in Water**	Disperses in water
Specific Gravity	1.15	**pH**	6.0 - 8.5
Vapour Pressure	0.15 mPa @ 25°C for Carbendazim	**Relative Vapour Density (Air=1)**	Not available
Evaporation Rate	Not available	**Odour Threshold**	Not available
Viscosity	Not available	**Volatile Component**	~46%
Partition Coefficient: n-octanol/water (log value)	Kow Log P is 1.51 (pH7, Carbendazim)	**Density**	Not available
Flash Point	Not available	**Flammability**	Non combustible material.
Auto-Ignition Temperature	Not available	**Explosion Limit - Upper**	Not available
Explosion Limit - Lower	Not available	**Explosion Properties**	Not available
Oxidising Properties	Not available	**Particle Characteristics**	Not available

Other Information
pKa is 4.2 (weak base)

Section 10 - Stability and Reactivity

Reactivity
Reacts with incompatible materials.

Chemical Stability
Stable under normal conditions of storage and handling.

Possibility of hazardous reactions
Not available.

Conditions to Avoid
Extremes of temperature and direct sunlight.

Incompatible Materials
Not available.

Hazardous Decomposition Products
Under fire conditions this product may emit toxic and/or irritating fumes, smoke and gases including carbon monoxide, carbon dioxide and oxides of nitrogen.

Hazardous Polymerization
Hazardous polymerization is not possible.

Section 11 - Toxicological Information

Toxicology Information
Toxicity data for material given below.

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

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

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

Ingestion
Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Inhalation
Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

Skin
May be irritating to skin. The symptoms may include redness, itching and swelling. May cause an allergic skin reaction.

Eye
May be irritating to eyes. The symptoms may include redness, itching and tearing.

Respiratory Sensitisation
Not expected to be a respiratory sensitiser.

Skin Sensitisation
Not expected to be a skin sensitiser.

Germ Cell Mutagenicity
May cause genetic defects. Classified as known or presumed to induce heritable mutations.

Carcinogenicity
Not considered to be a carcinogenic hazard.

Reproductive Toxicity
May damage fertility. Classified as a known or presumed human reproductive toxicant. May damage the unborn child. Classified as a known or presumed human developmental toxicant.

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 and irreversible male infertility in laboratory animals. Avoid contact with carbendazim".

STOT - Single Exposure
Not expected to cause toxicity to a specific target organ.

STOT - Repeated Exposure
Not expected to cause toxicity to a specific target organ.

Aspiration Hazard
Not expected to be an aspiration hazard.

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

Other Information
The Australian Acceptable Daily Intake (ADI) for copper 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 themost sensitive indicators and the most sensitive species. (Ref: Australian Pesticides and Veterinary Medicines Authority (APVMA) December 2022.)

Section 12 - Ecological Information

Ecotoxicity
Very toxic to aquatic life with long lasting effects.
The available ecological data is given below.

Persistence and degradability
Average soil half life of carbendazim is 6 - 12 months.

Mobility
Not available

Bioaccumulative Potential
Not available

Other Adverse Effects
Not available

Environmental Protection
Do not discharge this material into waterways, drains and sewers.

Acute Toxicity - Fish
LC50 (rainbow trout): 0.87 mg/l/96h.

Acute Toxicity - Daphnia
EC50 (daphnia magna): 0.22 mg/l/48h.

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.

Hazardous to the Ozone Layer
This product is not expected to deplete the ozone layer.

Section 13 - Disposal Considerations

Disposal Considerations
Dispose of waste according to applicable local and national regulations. Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes including emptied containers are controlled wastes and should be disposed of in accordance with all applicable local and national regulations. To minimise personal exposure, refer to Section 8 - Exposure Controls and Personal Protection.

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®).

Dispose of dip bypouring evenly into a limed disposal pit, specifically marked and set up for this purpose clear of waterways, desirable vegetationand tree roots. Alternatively, spray onto grassed areas where runoff to waterways, leaching to ground water or grazing by animals will not occur.

Container Disposal and Methods
Do not use this container for any other purpose.

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 no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear ofwaterways, desirable vegetation and tree roots.

Empty containers and product should not be burnt.

If not recycling, puncture or shred and bury containers in local authority landfill.

If recycling, replace cap and return clean containers to recycler or designated collection point.

Triple or preferably pressure rinse inner bladder or containers before disposal. Add rinsings to the spray tank.

Section 14 - Transport Information

Transport Information
Road and Rail Transport (ADG Code):
This product complies with the requirements of Special Provision AU01 and is therefore exempted from being classified as Dangerous Goods according to the ADG Code.
Note: Special Provision AU01:
Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to this Code when transported by road or rail in: packagings that do not incorporate a receptacle exceeding 500 kg(L); or IBCs.

Marine Transport (IMO/IMDG):
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.
Class/Division: 9
UN No: 3082
Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains CARBENDAZIM) MARINE POLLUTANT
Packing Group: III
EMS: F-A, S-F
Special Provisions: 274, 335, 969

Air Transport (ICAO/IATA):
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
Class/Division: 9
UN No: 3082
Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s.(Contains Carbendazim)
Packing Group: III
Label: Miscellaneous, Environmentally hazardous
Packaging Instructions (passenger & cargo): 964
Packaging Instructions (cargo only): 964
Special provisions: A97, A158, A197, A215

UN Number
None Allocated

Proper Shipping Name
None Allocated

Transport Hazard Class
None Allocated

Hazchem Code
•3Z

Special Precautions for User
Not available

IMDG Marine pollutant
Yes

Transport in Bulk
Not available

Section 15 - Regulatory Information

Regulatory Information
Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) including Work, Health and Safety Regulations, Australia.

Classified as a Scheduled 7 Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Schedule 7 Poisons should be available only to specialised or authorised users. Special regulations restricting their availability, possession, storage or use may apply.

Australia: WHS regulations (2011) - Schedule 11: classification not listed.

Poisons Schedule
S7

Montreal Protocol
Not listed

Stockholm Convention
Not listed

Rotterdam Convention
Not listed

International Convention for the Prevention of Pollution from Ships (MARPOL)
Not available

Agricultural and Veterinary Chemicals Act 1994
APVMA product number: 59815.
This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA).

Basel Convention
Not listed

Section 16 - Any Other Relevant Information

Date of Preparation
Amendment: June 2024, Product Identifier updated

SDS Reviewed: January 2023
Supersedes: April 2021

Version Number
2.1

Literature References
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.

Standard for the Uniform Scheduling of Medicines and Poisons.
Australian Code for the Transport of Dangerous Goods by Road & Rail.
Work Health and Safety Regulations, Schedule 10: Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Code of Practice for Supply Diversion into Illicit Drug Manufacture.
National Code of Practice for Chemicals of Security Concern.
Agricultural Compounds and Veterinary Chemicals Act.
International Agency for Research on Cancer (IARC) Monographs.
Montreal Protocol on Substances that Deplete the Ozone Layer.
Stockholm Convention on Persistent Organic Pollutants (POPs).
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.
Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal.
International Air Transport Association (IATA) Dangerous Goods Regulations.
International Maritime Dangerous Goods (IMDG) Code.
Workplace exposure standards for airborne contaminants.
Adopted biological exposure determinants, American Conference of Industrial Hygienists (ACGIH).
Globally Harmonised System of Classification and Labelling of Chemicals (7th revised edition).
Code of Practice: Managing Noise and Preventing Hearing Loss at Work.

Contact Person/Point
Normal hours: SDS coordinator : Phone +61 3 9282 1000
After hours: Shift supervisor : Phone 1800 033 498

User Codes

User Title Label	User Codes
Field 4	Y

END OF SDS