



Material Safety Data Sheet

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Infosafe No. NUOFJ Issue Date : March 2005 ISSUED by NUFARM

Product Name : **Carbend Fungicide**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name Carbend Fungicide
Product Code 5788
Product 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.
Company Name NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address 103-105 Pipe Road Laverton North
Victoria 3026 Australia
Emergency Tel. 24hr 1800 033 498
Telephone/Telex Number Tel: (03) 9282-1000 Fax: (03) 9282-1001
Product Type Group A Fungicide
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. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

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

3. HAZARDS IDENTIFICATION

May cause heritable genetic damage.
May impair fertility.
May cause harm to the unborn child

Other Information Poisons Schedule S6

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.

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 Poisons Information Centre on 13 11 26 (Australia).

Advice to Doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES



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Extinguishing Media If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.

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

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

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

Other Information 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

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

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

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits No exposure standards have been set for this product or the active ingredients.

Personal Protective Equipment When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.
Re-entry period: Do not enter treated area until spray has dried.

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

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

Appearance White to grey liquid suspension

Odour Faint odour

Solubility in Water Disperses in water.

Specific Gravity (H₂O=1) 1.15

pH Value 6.0 - 8.5

Vapour Pressure 0.15 mPa @ 25°C for Carbendazim

Volatile Component ~46%

Partition co-efficient, n-octanol/water Kow Log P is 1.51 (pH7, Carbendazim)

Flammability Non combustible material.

Other Information pKa is 4.2 (weak base)

10. STABILITY AND REACTIVITY

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Stability Stable under normal conditions.

Hazardous Reaction

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.

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, December 2004).

12. ECOLOGICAL INFORMATION

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

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

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

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

Acute Toxicity - Daphnia EC50 (48 hr) 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 (ChemCollect).



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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 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

Risk Phrase R46(2) May cause heritable genetic damage.
R60(2) May impair fertility.
R61(2) May cause harm to the unborn child
Safety Phrase 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.
Poisons Schedule S6
Hazard Category Toxic
Packaging & Labelling POISON
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING
AICS (Australia) All of the components in this product are listed on the Australian Inventory of Chemical Substances.

16. OTHER INFORMATION

Contact Person/Point Normal Hours: Mr Volker Maier Phone: (03) 9282 1000
After Hours: Shift Supervisor Phone: 1800 033 498
Revisions Highlighted The MSDS was reviewed. Minor changes were made to the information. The MSDS is now issued in a 16 header format.
...End Of MSDS...