



Infosafe No™ 3NU27

Issue Date : July 2010

ISSUED by NUFARM

Product Name **UNITE 720 Fungicide**

Classified as hazardous

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	UNITE 720 Fungicide
Product Code	5787
Product Type	Group M5 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	For the control of fungus diseases on almonds, bananas, cucurbits, grapes, ornamentals, peanuts, pulses, stone fruits, tobacco, turf and vegetables as specified in 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	Classified as hazardous 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)	Classified as hazardous R26 Very toxic by inhalation. R37 Irritating to respiratory system. R40(3) Possible risk of irreversible effects. R41 Risk of serious damage to eyes. R43 May cause sensitization by skin contact.
Safety Phrase(s)	S1/2 Keep locked up and out of reach of children. S13 Keep away from food, drink and animal feeding stuffs. S2 Keep out of reach of children. S25 Avoid contact with eyes. S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37 Wear suitable protective clothing and gloves. S36/37/39 Wear suitable protective clothing, gloves and eye/face protection. S45 In case of accident or if you feel unwell seek medical advice immediately
Other Information	Poisons Schedule S6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization	Liquid									
Ingredients	<table><thead><tr><th><u>Name</u></th><th><u>CAS</u></th><th><u>Proportion</u></th></tr></thead><tbody><tr><td>Chlorothalonil</td><td>1897-45-6</td><td>720 g/L</td></tr><tr><td>Other ingredients (considered non-hazardous)</td><td></td><td>Balance</td></tr></tbody></table>	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>	Chlorothalonil	1897-45-6	720 g/L	Other ingredients (considered non-hazardous)		Balance
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Chlorothalonil	1897-45-6	720 g/L								
Other ingredients (considered non-hazardous)		Balance								

4. FIRST AID MEASURES

Inhalation	Remove affected person to fresh air until recovered. If symptoms develop or persist, seek medical advice.
Ingestion	Rinse mouth and then drink plenty of water. Do not give anything by mouth to a semi-conscious or unconscious person. If vomiting occurs, give more water to drink to assist dilution.
Skin	Remove contaminated clothing and launder before re-use.

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Eye	Wash affected areas thoroughly with soap and water. If irritation persists, seek medical advice. 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. Persons having allergic reactions respond to treatment with antihistamines or steroid creams and/or systemic steroids.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Water fog, foam, carbon dioxide or dry chemical.
Hazards from Combustion Products	May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.
Special Protective Equipment for fire fighters	Breathable air apparatus must 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.
Emergency Action in case of Fire	If exposed to fire, keep container cool by spraying with water.
Other Information	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

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. Dispose of at a landfill in accordance with local regulations.
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.
Clean-up Methods - Large Spillages	Place damaged containers in recovery bins (if available) and return to manufacturer. If large liquid spills occur, attempt to recover as much spilt material from sumps and bunded areas before absorbing remaining material into vermiculite or other absorbent.
Environmental Precautions	Prevent from entering drains, waterways or sewers.

7. HANDLING AND STORAGE

Precautions for Safe Handling	Do NOT contaminate dams, rivers or streams, or any other water bodies with pesticide or used containers.
Conditions for Safe Storage	Store in the closed, original container in a dry, well ventilated area out of direct sunlight. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs. Store in a locked enclosure.
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.
Respiratory Protection	Do not inhale spray mist.
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,

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Hygiene Measures	elbow-length PVC gloves and goggles and disposable mist mask. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.
Requirements Concerning Special Training	After each day's use, wash contaminated clothing and safety equipment. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Appearance	White opaque liquid
Solubility in Water	Disperses in water.
Specific Gravity	1.354
Vapour Pressure	0.076 mPa @ 25°C for chlorothalonil.
Volatile Component	~40%
Octanol/Water Partition Coefficient	Kow Log P is 2.92 (25°C, chlorothalonil)
Flammability	Non combustible material.

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Hazardous Reactions	Keep away from strong oxidising agents.
Hazardous Polymerization	Hazardous polymerisation is not possible.

11. TOXICOLOGICAL INFORMATION

Inhalation	Not a likely route of exposure when handling the concentrate. However, care should be taken to avoid the inhalation of excessive amounts of spray mist during field spraying, respiratory irritation may occur.
Ingestion	May cause irritation to mouth, throat and stomach. Possible symptoms of exposure include: nausea, vomiting and central nervous system depression.
Skin	May irritate the skin. Prolonged or repeated exposure may cause skin sensitisation.
Eye	The concentrate will cause severe irritation and possible damage unless washed off immediately.
Chronic Effects	Liver and kidney damage has been noted in laboratory animals that have been fed excessive doses of chlorothalonil. Reports of human experience in use of chlorothalonil based products demonstrate that some individuals become sensitive to contact with this compound.
Reproductive Toxicity	Data indicates no reproductive effects.
Carcinogenicity	Worksafe Australia has classified chlorothalonil in the occupational environment as a Carcinogen Category 3 substance. This means that the substance is not classifiable as to carcinogenicity to humans.
Acute Toxicity - Oral	LD50 (rat) >5,000 mg/kg for chlorothalonil
Acute Toxicity - Dermal	LD50 (rat) >5,000 mg/kg for chlorothalonil
Acute Toxicity - Inhalation	LC50 (rat) (4hr) 0.1 mg/l for chlorothalonil
Eye Irritation	The product is an eye irritant.
Skin Irritation	Mild skin irritant.
Respiratory Irritation	The product is a respiratory irritant.
Skin Sensitisation	Chlorothalonil is a skin sensitiser.



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Other Information The Australian Acceptable Daily Intake (ADI) for chlorothalonil for a human is 0.01 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.5 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', December 2008).

12. ECOLOGICAL INFORMATION

Persistence / Degradability Average field half life of chlorothalonil is 7 - 30 days.
Adsorption studies indicate that chlorothalonil has very low mobility.
In water, half life for chlorothalonil is 4.5 hours to 9 days.

Known Harmful Effects on the Environment Highly toxic to fish and aquatic organisms.

Environ. Protection Marine pollutant.

Acute Toxicity - Fish The following is data for the active ingredient, chlorothalonil.
LC50 (96hr) for rainbow trout is 0.043 mg/l.
LC50 (96hr) for bluegill sunfish is 0.059 mg/l.
LC50 (48hr) for daphnia magna is 70 µg/l

Acute Toxicity - Daphnia

Acute Toxicity - Algae EC50 (120hr) for Selenastrum capricornutum is 210 µg/l.

Acute Toxicity - Other Organisms The following data is for the active ingredient, chlorothalonil.
Not toxic to bees.
Birds: Not toxic to birds. LD50 for mallard ducks is >4,640 mg/kg

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®).

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.
Returnable containers: empty contents fully into application equipment.
Replace cap, close all valves and return to the point of supply for refill or storage.
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

Transport Information Not classified as Dangerous Goods, according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
Storage and Transport Considered non dangerous for road and rail transport (in packaging, including IBCs not greater than 3000 Lt each) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01.

UN Number (Sea Transport) For bulk shipments as Class 9, use UN 3082, HazChem code 2Z.
3082



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IMO Class/Packing Group	Class 9; Packing Group III
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Chlorothalonil)

15. REGULATORY INFORMATION

Poisons Schedule	S6
Packaging & Labelling	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category	Very Toxic, Irritant
AICS (Australia)	All of the components in this product are listed on the Australian Inventory of Chemical Substances.

16. OTHER INFORMATION

Date of preparation or last revision of MSDS	Reviewed on 02/07/2010
Contact Person/Point Revisions Highlighted	Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498 The MSDS was reviewed. Minor changes were made to the information. ...End Of MSDS...

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