

MATERIAL SAFETY DATA SHEET



Date of Issue: May 23, 2003

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name Bayleton® 125 EC Fungicide
Other names None
Product codes & pack sizes Formulation code: NHB14P018
31389 (20 L)
Chemical group Triazole
Recommended use Agricultural fungicide
Formulation Emulsifiable concentrate
Supplier Bayer CropScience Pty Ltd ABN 87 000 226 022
Address 391 - 393 Tooronga Road, East Hawthorn
Victoria 3123, Australia
Telephone (03) 9248 6888
Facsimile (03) 9248 6800
Website www.bayercropscience.com.au
Contact Development Manager (03) 9248 6888
Emergency telephone number 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
HAZARDOUS SUBSTANCE (see Risk phrase below) – NON DANGEROUS GOOD
Combustible liquid

Hazard classification Hazardous (National Occupational Health and Safety Commission - NOHSC)
Risk phrases R65 - Harmful: May cause lung damage if swallowed.
Safety phrases See Sections 4, 5, 6, 7, 8, 10, 12, 13
ADG classification Not classified as a "Dangerous good" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail:
SUSDP classification Schedule 6 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients	CAS Number	Concentration (g/L)
Triadimefon	43121-43-3	125
Hydrocarbon liquid	64742-94-5	745
Naphthalene (in hydrocarbon liquid)	(91-20-3)	(89 – 104)
N-methyl-2-pyrrolidone	872-50-4	50
Other ingredients, including emulsifiers	Non-hazardous	103

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4. FIRST AID MEASURES

If poisoning occurs, immediately contact a doctor or Poisons Information Centre (telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to the doctor.

Inhalation	If inhaled, remove to fresh air and keep warm and at rest. Seek medical advice as above immediately. Administer artificial respiration if breathing has stopped.
Skin contact	Carefully remove contaminated clothing. Wash affected areas with soap and water. Seek medical advice if at all worried.
Eye contact	Rinse eyes immediately with clean water for at least 15 minutes, holding eyes open. Consult an eye specialist.
Ingestion	Obtain immediate medical advice as above. If swallowed, do NOT induce vomiting. Rinse mouth and give a glass of water. DO NOT attempt to give anything by mouth to a semi-conscious or unconscious person.
First aid facilities	Provide eye wash and safety shower in the workplace.
Medical attention	<u>Information for the physician:</u> Triadimefon is a triazole compound. There is no specific antidote. As this product contains a hydrocarbon liquid, care should be taken to prevent pulmonary aspiration. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema. <u>Symptoms</u> <i>Local:</i> Irritation of eyes and respiratory tract. Potential for skin sensitisation. Skin dryness or cracking from repeated exposure. <i>Systemic:</i> Headache, dizziness, anaesthesia and other central nervous system effects. Ingestion of N-methyl-2-pyrrolidone causes gastric disturbances such as nausea and vomiting. <u>Treatment</u> For <i>local contamination</i> treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as above under First Aid Measures. Therapeutic measures: Basic aid, decontamination, symptomatic treatment.

5. FIRE FIGHTING MEASURES

Extinguishing media	Foam, dry chemical or water spray.
Hazards from combustion products	In a fire, formation of hydrogen chloride, hydrogen cyanide, amines, carbon monoxide and nitrogen oxides can be expected.
Precautions for fire fighters	The product is a Class C1 Combustible liquid. Firefighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Avoid spraying directly into containers due to danger of boilover. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely later. Do not release contaminated water into the environment.
Hazchem code	Not applicable

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6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Extinguish or remove possible sources of ignition. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment as described in Section 8 - PERSONAL PROTECTION. Keep people and animals away. Prevent spilled material from entering drains or watercourses. Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

7. HANDLING AND STORAGE

Handling	Keep out of reach of children. Will irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale spray mist. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles and contaminated clothing. Keep product away from ignition sources.
Storage	Store in the closed, original container in a cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.
Flammability	Combustible liquid Class C1 – flash point between 61 and 150° C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards	The manufacturer of the hydrocarbon liquid recommends an Occupational Exposure Limit for solvent naphtha (petroleum), heavy aromatic: TWA: 100 mg/m ³ (15 ppm). For the small amount of naphthalene present in the solvent the NOHSC Occupational Exposure Limits are: TWA: 10 ppm (52 mg/m ³), STEL: 15 ppm (79 mg/m ³). Skin. The manufacturer of N-methyl-2-pyrrolidone recommends a TWA of 20 ppm (80 mg/m ³). Skin.
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Definitions

Exposure standard – Time Weighted Average (TWA) means the average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.

Exposure standard – Short term exposure limit (STEL) means a 15 minute TWA exposure which should not be exceeded at any time during the working day.

Skin notation – Absorption through the skin may be a significant source of exposure.

Biological limit values	No biological limit allocated.
Engineering controls	Control process conditions to avoid contact. Use in a well-ventilated area only.
Personal protective equipment	<ul style="list-style-type: none">Wear safety goggles.Wear cotton overalls buttoned to the neck and wrist and a washable hat.Wear elbow-length PVC or nitrile gloves.Wear an approved respirator suitable for organic vapour/mist if exposure to vapours or mists is likely or ventilation is inadequate.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear amber liquid
Odour:	Aromatic hydrocarbon
pH:	3.0 to 4.0 (5% in water)
Vapour pressure:	0.006 kPa at 20° C (hydrocarbon solvent)
Vapour density:	> 1.00(101.3 kPa/air=1) (hydrocarbon solvent)
Boiling point:	220 - 290° C (hydrocarbon solvent)
Freezing/melting point:	- 13° C (hydrocarbon solvent)
Solubility:	Emulsifies in water
Specific gravity:	1.023 at 20° C
Flash point:	95° C (PMCC ASTM D93) (hydrocarbon solvent)
Flammability (explosive) limits:	Lower: 0.6 vol. %; upper: 7 vol. % (hydrocarbon solvent)
Auto-ignition temperature:	> 450° C (hydrocarbon solvent)
Partition coefficient (octanol/water):	<i>Triadimefon</i> : Log P_{ow} = 3.11

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions of use.
Conditions to avoid	Extreme heat.
Incompatible materials	Strong oxidising agents, acids.
Hazardous decomposition products	None under normal conditions. In a fire, formation of hydrogen chloride, hydrogen cyanide, amines, carbon monoxide and nitrogen oxides can be expected.
Hazardous reactions	None

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation	High vapour concentrations may be irritating to the respiratory tract, may cause headaches and dizziness, could be anaesthetic and may have other central nervous system effects.
Skin contact	Repeated exposure may cause skin dryness or cracking. Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis. Triadimefon may cause skin sensitisation.
Eye contact	Will irritate eyes.

11. TOXICOLOGICAL INFORMATION - continued

POTENTIAL HEALTH EFFECTS - continued

Ingestion Harmful if swallowed. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

ANIMAL TOXICITY DATA – *Triadimefon*

Acute:

Oral toxicity LD₅₀ rat: 1000 mg/kg

Dermal toxicity LD₅₀ rat: > 5000 mg/kg

Inhalation toxicity LC₅₀ rat: > 3.3 mg/L, dust (4 h)

Skin irritation Slightly irritating (rabbit)

Mucous membrane irritation Non irritating (rabbit)

Sensitisation Triadimefon was found to be sensitising in the guinea pig maximization test (Magnusson and Kligman).

Chronic:

Triadimefon is not listed as a carcinogen. Triadimefon was not mutagenic in the Ames test. No known chronic toxicity effects are associated with N-methyl-2-pyrrolidone if exposure limit is observed. This product contains naphthalene. The International Agency for Research on Cancer evaluated naphthalene and concluded that there was sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Accordingly, IARC classified naphthalene as a possible human carcinogen (Group 2B).

12. ECOLOGICAL INFORMATION

Toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment. Triadimefon is non toxic to bees and birds. DO NOT contaminate streams, rivers or waterways with the product or used containers.

Ecotoxicity Triadimefon:
Fish toxicity:
 LC₅₀: 4.08 mg/L (96 h); trout (*Oncorhynchus mykiss*)
 LC₅₀: 64 mg/L (96 h); bluegill sunfish (*Lepomis macrochirus*)
Aquatic invertebrate toxicity:
 EC₅₀: 7.16 mg/L (48 h) *Daphnia magna*
Algae toxicity:
 Growth rate IC₅₀: 1.71 mg/L (96 h); green algae (*Desmodesmus subspicatus*)
Bird toxicity:
 Acute oral LD₅₀: > 4000 mg/kg; mallard duck

Environmental fate, persistence, degradability, mobility Triadimefon: DT₅₀ in sandy loam approx. 18 days; in loam approx. 6 days.
 Bioconcentration factor (BCF): 64
 Triadimefon is stable in water and does not readily undergo hydrolysis.
 The hydrocarbon liquid is "readily" biodegradable.

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13. DISPOSAL CONSIDERATIONS

Triple or preferably pressure rinse container before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the container below 500 mm 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. Dispose of waste product through a reputable waste contractor.

14. TRANSPORT INFORMATION

UN number	Not applicable
Proper shipping name	Not applicable
Class and subsidiary risk	Not applicable
Packing group	Not applicable
EPG	Not applicable
Hazchem code	Not applicable
Marine pollutant	No

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988.
National Registration Authority approval number: 57058

See also Section 2.

16. OTHER INFORMATION

Trademark information Bayleton® is a Registered Trademark of Bayer.

Preparation information New MSDS (replaces March 18, 2003 Experimental MSDS)

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

END OF MSDS