

MATERIAL SAFETY DATA SHEET

Baycor® Turf Fungicide Liquid

Date of Issue: September 29th, 2006

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

Product name: Baycor® Turf Fungicide Liquid
Other names: None
Product code: 4544985 (1 L)
Chemical group: Triazole
Recommended use: For the control of various fungal diseases in turf.
Formulation: Emulsifiable concentrate (EC)
Supplier: Bayer Environmental Science – A Business Group of 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: Technical Manager (03) 9248 6888
Emergency Telephone Number: 1800 033 111 – Orica SH&E Shared Services

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD
Irritating to eyes and skin. Not flammable.

Hazard designation: Hazardous (National Occupational Health and Safety Commission - NOHSC)
Risk phrases: R36/38 – Irritating to eyes and skin
Safety phrases: See Sections 4, 5, 6, 7, 8, 9, 13
ADG classification: Not a "Dangerous good" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. For transport by sea, Baycor Turf Fungicide Liquid is a MARINE POLLUTANT. See Section 14.
SUSDP classification: Schedule 6 (Standard for the Uniform Scheduling of Drugs and Poisons)

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/L):
Bitertanol	[55179-31-2]	300
N-methyl-2-pyrrolidone	[872-50-4]	539
Other ingredients	[Non-hazardous]	220

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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 a doctor.

- Inhalation:** Remove patient to fresh air. Keep rested and warm.
- Skin contact:** Remove contaminated clothing including shoes. Wash affected areas thoroughly with soap and water.
- Eye contact:** If in eyes, hold eyes open, flood with clean water for at least 15 minutes and see a doctor.
- Ingestion:** If swallowed do not induce vomiting. Give a glass of water to drink. Never give anything by mouth to an unconscious person.
- First Aid Facilities:** Provide washing facilities in the workplace.
- Symptoms:** Cases of human poisonings have not been reported in the literature. Ingestion of small amount did not cause any symptoms, larger amounts caused gastric irritation in one case, drowsiness in another. However, these symptoms may rather have been due to the solvents in the formulations than to bitertanol.
- In animal experiments sedation, breathing problems and irritation of gastric mucosa have been seen after very high doses.
- Medical attention:** Treat symptoms. No specific antidote known.

5. FIRE FIGHTING MEASURES

- Extinguishing media:** Water spray, carbon dioxide, foam, dry chemical.
- Hazards from combustion products:** In the event of a fire the formation of hydrogen cyanide, carbon monoxide and nitrogen oxides must be anticipated.
- Precautions for fire fighters:** Firefighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). If possible and without risk, remove intact containers from exposure to fire. Otherwise, spray unopened containers with water to keep cool. Contain fire-fighting water by bunding area with sand or earth to prevent it entering any bodies of water. Dispose of extinguishing agent and spillage safely later. Contamination of water bodies should be avoided.

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6. ACCIDENTAL RELEASE MEASURES

Dealing with spills and disposals may result in the potential for increased personal exposure. Protective clothing and equipment as described in the PERSONAL PROTECTION section should be worn. Avoid contact with spilled material or contaminated surfaces. Prevent spill from entering drains, sewers or any body of water. Contain and absorb with sand, earth or inert absorbent material. Fill along with any contaminated material into sealable containers for disposal at an approved local waste disposal site. Clean affected area with an aqueous detergent and a small amount of water. Absorb this with hydrated lime and place in a sealed drum. On completion of clean-up remove and wash all protective clothing and equipment with detergent and water. Any heavily contaminated clothing should be placed in a plastic garbage bag and placed in a sealable drum. Do not smoke, eat or drink during clean up operation.

7. HANDLING AND STORAGE

Handling: Keep out of reach of children.

Storage: Store in the closed original container in a cool, well ventilated area. Do not store for prolonged periods in direct sunlight. Do not store near any material intended for consumption by humans or animals. Store away from any sources of ignition.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure standards: No exposure standards have been assigned. The manufacturer of N-methyl-2-pyrrolidone recommends a TWA of 20 ppm (80 mg/m³).

Definition:

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.

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

Engineering controls: Control process conditions to avoid contact.

Personal Protective Equipment:

Eyes:	Avoid contact with eyes – wear face-shield or goggles.
Clothing:	Avoid contact with skin. Wear cotton overalls buttoned to the neck and wrist and a washable hat.
Gloves:	Wear elbow length butyl rubber gloves.
Respiratory:	Avoid inhaling spray mist or vapour.
Other:	Do not eat, drink or smoke until after washing. Wash thoroughly after handling. After each day's use wash gloves, face-shield or goggles and contaminated clothing.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	A clear brownish liquid
Odour:	Aromatic odour
Vapour pressure:	Approximately 5 mbar at 20°C Approximately 18 mbar at 50°C
Vapour density:	24.7 sq mm at 20 degrees C
Boiling point:	Approx 150°C
Freezing/melting point:	Not established
Solubility:	Emulsifiable in water
Specific gravity	1.06 at 20°C
pH:	3.0 to 8.0 (10% in water)
Flash Point:	> 65 °C
Flammability (explosive) limits:	Not determined
Auto-ignition temperature:	290°C
Octanol/water partition coefficient:	Not available
Formulation:	Emulsifiable concentrate

10. STABILITY AND REACTIVITY

Chemical stability:	Product is stable. Not flammable under normal conditions of use.
Hazardous polymerisation:	Hazardous polymerisation is not likely to occur.
Conditions to avoid:	Keep away from sources of ignition.
Incompatible materials:	Avoid strong oxidising agents.
Hazardous decomposition products:	In the event of fire the formation of hydrogen cyanide, carbon monoxide and nitrogen oxides must be anticipated.

11. TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

Inhalation:	Prolonged inhalation may cause respiratory irritation and severe irritation of mucous membranes.
Skin contact:	May irritate the skin.
Eye contact:	Will damage eyes.
Ingestion:	Harmful if swallowed. May cause severe irritation of mucous membranes
Other:	None

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ANIMAL TOXICITY DATA – PRODUCT: No data available for the product.

ANIMAL TOXICITY DATA – INDIVIDUAL INGREDIENTS:

Acute:

Oral toxicity:	LD ₅₀ rat: > 5000 mg/kg (Bitertanol)
Dermal toxicity:	LD ₅₀ rat: > 5000 mg/kg (Bitertanol)
Inhalation toxicity:	Prolonged inhalation of spray mist may produce respiratory irritation
Skin irritation:	Irritating to the skin.
Eye irritation:	Irritating to the eyes.
Sensitisation:	Non-sensitising

Chronic:

Animal studies show no evidence of carcinogenic effects and no teratogenic potential.

12. ECOLOGICAL INFORMATION

Dangerous to fish. DO NOT contaminate streams, rivers or waterways with the product or used containers.

Fish toxicity:	LC ₅₀ (96h) 2.14 mg/L rainbow trout (bitertanol)
Daphnia toxicity:	LC ₅₀ (48h) 1.8 – 7 mg/L (bitertanol)
Toxicity to algae:	EC ₅₀ 6.52 mg/L (bitertanol)
Bird toxicity:	LD ₅₀ : > 2000 mg/kg mallard duck (bitertanol)
Bee toxicity:	LD ₅₀ (contact) >200 µg/bee; (oral) > 104.4 µg/bee
Environmental fate, persistence and degradation:	Degradation of bitertanol in soil is rapid.

13. DISPOSAL CONSIDERATIONS

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. Break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury empty containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, vegetation and roots. Empty containers and product should not be burnt. Returnable containers should be taken back to point of supply for refill or storage. Dispose of waste product through a reputable waste contractor.

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14. TRANSPORT INFORMATION

UN number:	Not applicable (road/rail)
Proper shipping name:	Not applicable (road/rail)
Class and Subsidiary Risk:	Not applicable (road/rail)
Packing Group:	Not applicable (road/rail)
EPG:	Not applicable (road/rail)
Hazchem code:	Not applicable (road/rail)
Marine pollutant:	Yes – If this product is shipped by sea it is a Class 9 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (contains bitertanol), UN 3082, Packing Group III.

15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority Approval Number: 30652

16. OTHER INFORMATION

Trademark information:	Baycor® is a Registered Trademark of Bayer
Preparation information:	Replaces October 20, 2002 edition. Reasons for update: Risk phrases, ADG classification, First aid measures, Firefighting measures, Accidental release measures, Toxicological information, Marine pollutant status, Transport information.
Data sources:	Bayer CropScience Pty Ltd product safety data and published data

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