

# MATERIAL SAFETY DATA SHEET

## Dedicate® Turf Fungicide

Date of Issue: August 19<sup>th</sup>, 2009

### 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

**Product name:** Dedicate® Turf Fungicide  
**Other names:** None  
**Chemical group:** Strobilurin/Triazole  
**Recommended use:** For use as a fungicide in professionally managed turf.  
**Formulation:** Suspension Concentrate  
**Supplier:** Bayer Environmental Science – A Business Operation 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.bayeres.com.au](http://www.bayeres.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

May cause sensitisation by skin contact. Possible risk of harm to the unborn child

**Hazard designation:** Classified as hazardous according to the criteria of Worksafe Australia  
**Risk phrases:** R43 – May cause sensitisation by skin contact  
R63 – Possible risk of harm to the unborn child  
**Safety phrases:** See Sections 4, 5, 6, 7, 8, 9, 13  
**ADG classification:** Not “dangerous goods” 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, Dedicate Turf Fungicide is a MARINE POLLUTANT. See Section 14.  
**SUSDP classification:** Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/L)
Tebuconazole	[107534-96-3]	200
Trifloxystrobin	[141517-21-7]	100
Other ingredients (non-hazardous)	-	~800

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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 victim to fresh air and keep at rest. Seek medical advice.
- Skin contact:** Remove any contaminated clothing and wash skin thoroughly with soap and water.
- Eye contact:** Hold eyes open and flood with water for at least 15 minutes. Seek medical advice.
- Ingestion:** Wash out mouth with water. Do NOT induce vomiting. Keep patient at rest and seek medical advice immediately.
- First Aid Facilities:** Provide washing facilities in the workplace.
- Symptoms:** There are no known specific symptoms.
- Medical attention:** *Local contamination:*  
Treatment should be symptomatic after decontamination. In case of skin or eye contamination, treat as above under First Aid Measures.  
*Systemic poisoning:*  
There is no specific antidote. Treat symptoms. For significant ingestions, an aqueous suspension of activated charcoal or sodium sulfate may be administered to absorb remaining toxicant.

### 5. FIRE FIGHTING MEASURES

- Extinguishing media:** Water spray, foam, carbon dioxide, sand.
- Hazards from combustion products:** If involved in a fire: hydrogen cyanide, hydrogen chloride, hydrogen fluoride, carbon monoxide, carbon dioxide and nitrogen oxides may be evolved.
- Precautions for fire fighters:** Fire fighters 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. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of extinguishing agent and spillage safely later.

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## Dedicate® Turf Fungicide

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---

### 6. ACCIDENTAL RELEASE MEASURES

Avoid contact with spilled material or contaminated surfaces. Do not smoke, eat or drink during the clean up process. Wear personal protective clothing and equipment as detailed in Section 8 PERSONAL PROTECTION. Keep people and animals away. Contain spill and absorb with earth, sand, clay, or other absorbent material. Prevent spilled material from entering drains or watercourses. Collect and store in properly labelled drums for safe disposal. Clean floor with a damp cloth and place it in the drum. Seal drums and label ready 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. Keep away from heat or moisture.

**Storage:** Store away from food, drink or animal feeding stuffs. 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 standards:** No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia) for the product or its ingredients.

**Engineering controls:** No engineering controls are required for the normal use of this product according to label

**Personal Protective Equipment:** When opening the container and preparing spray wear elbow length PVC gloves. Wash hands after use. After each day's use wash gloves.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** White suspension  
**Odour:** Slight chemical  
**Vapour pressure:** Not available  
**Vapour density:** Not available  
**Boiling point:** Not available  
**Freezing/melting point:** Not available  
**Solubility:** Not available  
**Density:** 1097 – 1104 g/L  
**pH:** 7.9 (undiluted)  
**Flash Point:** Not applicable  
**Flammability (explosive) limits:** Not applicable  
**Auto-ignition temperature:** Not applicable  
**Octanol/water partition coefficient:** Not available  
**Formulation:** Suspension concentrate

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---

### 10. STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under normal conditions of use.
<b>Hazardous polymerisation:</b>	Hazardous polymerisation will not occur.
<b>Conditions to avoid:</b>	Extreme heat, oxidising agents.
<b>Incompatible materials:</b>	Not available
<b>Hazardous decomposition products:</b>	If involved in a fire: hydrogen chloride, hydrogen fluoride, hydrogen cyanide, carbon monoxide, carbon dioxide and nitrogen oxides may be evolved.

### 11. TOXICOLOGICAL INFORMATION

#### POTENTIAL HEALTH EFFECTS

<b>Inhalation:</b>	Product is of low toxicity via the inhalation route, however inhalation of large amounts may be harmful.
<b>Skin contact:</b>	Not irritating to skin.
<b>Eye contact:</b>	Not irritating to the eyes
<b>Ingestion:</b>	Product is of low toxicity via the oral route, however it may be harmful if a large amount is ingested.
<b>Other:</b>	None

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

#### Acute:

<b>Oral toxicity:</b>	LD <sub>50</sub> rat = 2500 mg/kg
<b>Dermal toxicity:</b>	LD <sub>50</sub> rat: >4000 mg/kg
<b>Inhalation toxicity:</b>	LC <sub>50</sub> rat > 2430 mg/m <sup>3</sup>
<b>Skin irritation:</b>	Not irritating
<b>Eye irritation:</b>	Not irritating
<b>Sensitisation:</b>	Not sensitising

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## Dedicate® Turf Fungicide

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### 11. TOXICOLOGICAL INFORMATION CONT.

#### Chronic:

Tebuconazole is not listed by The National Toxicology Program (NTP) or the International Agency for Research on Cancer (IARC) as a carcinogen. The European Union has classified tebuconazole as having a possible risk of harm to the unborn child. Tebuconazole was not mutagenic or genotoxic in a battery of *in vitro* and *in vivo* mutagenicity studies. Trifloxystrobin has been tested for mutagenicity, neurotoxicity, reproduction, developmental, chronic toxicity and carcinogenicity. No evidence of adverse effects relevant to humans was obtained.

### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity:

##### Tebuconazole:

*Fish toxicity:* LC<sub>50</sub> (96 h) bluegill sunfish (*Lepomis macrochirus*) 5.7 mg/L

LC<sub>50</sub> (96 h) rainbow trout (*Onchorhynchus mykiss*) 4.4 mg/L

*Daphnia toxicity:* EC<sub>50</sub> (48 h) water flea (*Daphnia magna*) 2.79 mg/L

##### *Algal toxicity:*

Growth rate: EC<sub>50</sub> (72 h) green algae (*Pseudokirchneriella subcapitata*) 3.8 mg/L

##### *Bird toxicity:*

Acute oral LD<sub>50</sub> bobwhite quail 1988 mg/kg

Acute oral LD<sub>50</sub> male Japanese quail 4438 mg/kg

Acute oral LD<sub>50</sub> female Japanese quail 2912 mg/kg

##### Trifloxystrobin:

*Fish toxicity:* LC<sub>50</sub> (96 h) bluegill sunfish (*Lepomis macrochirus*) 0.054 mg/L

LC<sub>50</sub> (96 h) trout (*Salmo trutta*) 0.015 mg/L

*Daphnia toxicity:* *Daphnia magna* EC<sub>50</sub> (48 h) 0.016 mg/L

*Algal toxicity:* EC<sub>50</sub> (72 h) green algae (*Desmodesmus subspicatus*) 0.016 mg/L

##### *Bird toxicity:*

Acute oral LD<sub>50</sub> bobwhite quail > 2000 mg/kg

Acute oral LD<sub>50</sub> mallard duck > 2250 mg/kg

#### Environmental fate, persistence and degradation:

The photolysis/metabolism half-life of tebuconazole is 2-3 months in natural water. It is strongly bound to soil and has low mobility.

Bioconcentration factor (BCF): 78

Biological degradability of trifloxystrobin: 0% after 29 days at 20° C, i.e. not readily degradable

Abiotic degradation: half life

t<sub>1/2</sub>: 3139 days at pH 5 (20° C)

t<sub>1/2</sub>: 80.1 days at pH 7 (20° C)

t<sub>1/2</sub>: 1.1 days at pH 9 (20° C)

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---

### 13. DISPOSAL CONSIDERATIONS

1) After intended use Rinse container before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. Dispose of at a local authority landfill. If no landfill is available, bury the containers 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.

2) After spill or accident: Dispose of sealed containers at an approved local waste disposal site.

### 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 tebuconazole and trifloxystrobin), 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: 62638

### 16. OTHER INFORMATION

Trademark information:	Dedicate® is a Registered Trademark of Bayer
Preparation information:	Replaces May 30 <sup>th</sup> , 2007 edition. Reason for update: 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