

# Safety Data Sheet



## Dedicate® Turf Fungicide

Version 2 / AUS  
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Revision Date: 21.06.2016  
Print Date: 24.06.2016

### SECTION 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

#### 1.1 Product identifier

**Trade name** Dedicate® Turf Fungicide  
**Product code (UVP)** 05686600

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Use** Fungicide

#### 1.3 Details of the supplier of the safety data sheet

**Supplier** Bayer CropScience Pty Ltd.  
ABN 87 000 226 022  
Level 1, 8 Redfern Road  
3123 Hawthorn East  
Victoria  
Australia

**Telephone** (03) 9248 6888  
**Telefax** (03) 9248 6800  
**Responsible Department** 1800 804 479 Technical Information Service  
**Website** [www.environmentalscience.bayer.com.au](http://www.environmentalscience.bayer.com.au)

#### 1.4 Emergency telephone no.

**Emergency telephone no.** 1800 033 111 IXOM Operations Pty Ltd

### SECTION 2. HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Australia. GHS Hazardous Chemical Information List

Reproductive toxicity: Category 2

Acute aquatic toxicity: Category 1

Chronic aquatic toxicity: Category 1

#### 2.2 Label elements

Hazard label for supply/use required.

##### Hazardous components which must be listed on the label:

Tebuconazole  
Trifloxystrobin

**Signal word:** Warning

##### Hazard statements

H361 Suspected of damaging fertility or the unborn child.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

##### Precautionary statements

P201 Obtain special instructions before use.



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- P202 Do not handle until all safety precautions have been read and understood.  
 P281 Use personal protective equipment as required.  
 P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
 P405 Store locked up.  
 P501 Dispose of contents/container in accordance with local regulation.

### 2.3 Other hazards

No other hazards known.

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### Chemical nature

Tebuconazole:Trifloxystrobin 200:100g/l

Chemical nature Suspension concentrate (=flowable concentrate)(SC)

Chemical Name	CAS-No.	Concentration [%]
Tebuconazole	107534-96-3	18.20
Trifloxystrobin	141517-21-7	9.10
1,2-Benzisothiazol-3(2H)-one	2634-33-5	>= 0.005 - <= 0.05
Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one	55965-84-9	>= 0.0002 - <= 0.0015
Other ingredients (non-hazardous) to 100%		

## SECTION 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 Safety Data Sheet to the doctor.**

### 4.1 Description of first aid measures

- General advice** Remove contaminated clothing immediately and dispose of safely. Move out of dangerous area. Place and transport victim in stable position (lying sideways).
- Inhalation** Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.
- Skin contact** Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water.
- Eye contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
- Ingestion** Do NOT induce vomiting. Call a physician or poison control center immediately. Rinse mouth.

### 4.2 Most important symptoms and effects, both acute and delayed

- Symptoms** No symptoms known or expected.



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### 4.3 Indication of any immediate medical attention and special treatment needed

**Treatment** Treat symptomatically.

## SECTION 5. FIRE FIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable** Water spray, Carbon dioxide (CO<sub>2</sub>), Foam, Sand

**5.2 Special hazards arising from the substance or mixture** In the event of fire the following may be released:, Hydrogen cyanide (hydrocyanic acid), Carbon monoxide (CO), Nitrogen oxides (NO<sub>x</sub>), Hydrogen fluoride

### 5.3 Advice for firefighters

**Special protective equipment for firefighters** In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.

**Further information** Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

**Hazchem Code** •3Z

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

**Precautions** Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

**6.2 Environmental precautions** Do not allow to get into surface water, drains and ground water.

### 6.3 Methods and materials for containment and cleaning up

**Methods for cleaning up** Clean contaminated floors and objects thoroughly, observing environmental regulations. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections** Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

## SECTION 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

**Advice on protection against fire and explosion** Keep away from heat and sources of ignition.

**Hygiene measures** Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be



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destroyed (burnt). Wash hands before breaks and immediately after handling the product.

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements for storage areas and containers** Keep containers tightly closed in a dry, cool and well-ventilated place.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Tebuconazole	107534-96-3	0.2 mg/m <sup>3</sup> (SK-ABS)		OES BCS*
Trifloxystrobin	141517-21-7	2.7 mg/m <sup>3</sup> (SK-SEN)		OES BCS*

\*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

**8.2 Exposure controls**

**Personal protective equipment - End user**

**Respiratory protection** Respiratory protection is not required under anticipated circumstances of exposure.

**Hand protection** Elbow-length PVC or nitrile gloves

**Skin and body protection** Cotton overall buttoned to the neck and wrist

**General protective measures** If product is handled while not enclosed, and if contact may occur: Complete suit protecting against chemicals

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

**Form** suspension

**Colour** white to light beige

**Odour** weak, characteristic

**pH** 6.0 - 8.0 at 100 % (23 °C)

**Flash point** > 100 °C  
Not relevant; aqueous solution

**Density** ca. 1.10 g/cm<sup>3</sup> at 20 °C

**Partition coefficient: n-octanol/water** Tebuconazole: log Pow: 3.7  
Trifloxystrobin: log Pow: 4.5 at 25 °C

**9.2 Other information** Further safety related physical-chemical data are not known.



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### SECTION 10. STABILITY AND REACTIVITY

#### 10.1 Reactivity

**Thermal decomposition** Stable under normal conditions.

**10.2 Chemical stability** Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions** No hazardous reactions when stored and handled according to prescribed instructions. Stable under recommended storage conditions.

**10.4 Conditions to avoid** Extremes of temperature and direct sunlight.

**10.5 Incompatible materials** Store only in the original container.

**10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects

**Acute oral toxicity** LD50 (Rat) ca. 2,500 mg/kg  
Test conducted with a similar formulation.

**Acute inhalation toxicity** LC50 (Rat) > 2.43 mg/l  
Exposure time: 4 h  
Highest attainable concentration.  
Determined in the form of a respirable aerosol.  
Test conducted with a similar formulation.

**Acute dermal toxicity** LD50 (Rat) > 4,000 mg/kg  
Test conducted with a similar formulation.

**Skin irritation** No skin irritation (Rabbit)  
Test conducted with a similar formulation.

**Eye irritation** No eye irritation (Rabbit)

**Sensitisation** Non-sensitizing. (Guinea pig)  
OECD Test Guideline 406, Magnusson & Kligman test  
Test conducted with a similar formulation.

#### Assessment mutagenicity

Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.  
Trifloxystrobin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

#### Assessment carcinogenicity

Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.  
Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.

#### Assessment toxicity to reproduction

Tebuconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Tebuconazole is related to parental toxicity.



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Trifloxystrobin caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Trifloxystrobin is related to parental toxicity.

### Assessment developmental toxicity

Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.

Trifloxystrobin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Trifloxystrobin are related to maternal toxicity.

### Assessment repeated dose toxicity

Tebuconazole did not cause specific target organ toxicity in experimental animal studies.  
Trifloxystrobin did not cause specific target organ toxicity in experimental animal studies.

### Aspiration hazard

Based on available data, the classification criteria are not met.

### Information on likely routes of exposure

Low acute inhalation toxicity., Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

No skin irritation

No eye irritation

Low acute oral toxicity., Ingestion of large amounts may be harmful (see Signs and Symptoms).

### Early onset symptoms related to exposure

Refer to Section 4

### Delayed health effects from exposure

Refer to Section 11

### Exposure levels and health effects

Refer to Section 4

### Interactive effects

Not known

### When specific chemical data is not available

Not applicable

### Mixture of chemicals

Refer to Section 2.1

## SECTION 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

**Toxicity to fish** LC50 (Oncorhynchus mykiss (rainbow trout)) 0.286 mg/l  
Exposure time: 96 h

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) 0.224 mg/l  
Exposure time: 48 h



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**Toxicity to aquatic plants** (Raphidocelis subcapitata (freshwater green alga)) 0.99 mg/l  
Growth rate; Exposure time: 72 h

**12.2 Persistence and degradability**

**Biodegradability** Tebuconazole:  
Not rapidly biodegradable  
Trifloxystrobin:  
Not rapidly biodegradable

**Koc** Tebuconazole: Koc: 769  
Trifloxystrobin: Koc: 2377

**12.3 Bioaccumulative potential**

**Bioaccumulation** Tebuconazole: Bioconcentration factor (BCF) 35 - 59  
Does not bioaccumulate.  
Trifloxystrobin: Bioconcentration factor (BCF) 431  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil** Tebuconazole: Slightly mobile in soils  
Trifloxystrobin: Slightly mobile in soils

**12.5 Other adverse effects**

**Additional ecological information** The ecological data refer to a similar formulation.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Metal drums and plastic containers:  
Triple or preferably pressure rinse containers 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 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.

**SECTION 14. TRANSPORT INFORMATION**

**ADG**

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, TRIFLOXYSTROBIN SOLUTION)
Hazchem Code	•3Z

According to AU01, Environmentally Hazardous Substances in packagings, IBC or any other receptacle not exceeding 500 kg or 500 L are not subject to the ADG Code.



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### IMDG

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Marine pollutant	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, TRIFLOXYSTROBIN SOLUTION)

### IATA

UN number	<b>3082</b>
Transport hazard class(es)	9
Subsidiary Risk	None
Packaging group	III
Environm. Hazardous Mark	YES
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TEBUCONAZOLE, TRIFLOXYSTROBIN SOLUTION )

### SECTION 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Code Act 1994  
Australian Pesticides and Veterinary Medicines Authority approval number: 62638

#### SUSMP classification (Poison Schedule)

Schedule 5 (Standard for the Uniform Scheduling of Medicines and Poisons)

### SECTION 16. OTHER INFORMATION

**Trademark information** Dedicate® is a registered trademark of the Bayer Group.

This SDS 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 SDS 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.

#### Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
AU OEL	Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)





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CAS-Nr.	Chemical Abstracts Service number
CEILING	Ceiling Limit Value
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
OES BCS	OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"
PEAK	PEAK: Exposure Standard - Peak means a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes.
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SK-SEN	Skin sensitiser
SKIN_DES	SKIN_DES: Skin notation: Absorption through the skin may be a significant source of exposure.
STEL	STEL: Exposure standard - short term exposure limit (STEL): A 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL.
TWA	TWA: Exposure standard - time-weighted average (TWA): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day working week.
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

Changes since the last version are highlighted in the margin. This version replaces all previous versions.

END OF SDS