

# Safety data sheet

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BASF Safety data sheet  
Date / Revised: 09.12.2013  
Product: **VIVANDO® FUNGICIDE**

Version: 3.3

(30504529/SDS\_CPA\_AU/EN)

Date of print 22.01.2014

## 1. Substance/preparation and company identification

### VIVANDO® FUNGICIDE

Use: crop protection product, fungicide

Manufacturer/supplier:

BASF Australia Limited (ABN 62 008 437 867)  
Level 12, 28 Freshwater Place Southbank  
Victoria 3006, AUSTRALIA  
Telephone: +61 3 8855-6600  
Telefax number: +61 3 8855-6511

Emergency information:

BASF Emergency Advice Number: 1800 803 440 (24h) [within Australia]  
BASF Emergency Advice Number: + 61 3 8855 6666 [outside Australia]

## 2. Hazard identification

DANGEROUS GOOD, NON-HAZARDOUS SUBSTANCE

The product contains: 1,2-benzisothiazol-3(2H)-one  
May produce an allergic reaction.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Keep out of the reach of children.

Keep away from food, drink and animal feeding stuffs.

When using do not eat, drink or smoke.

Do not empty into drains.

This material and its container must be disposed of in a safe way.

Use appropriate container to avoid environmental contamination.

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### 3. Composition/information on ingredients

#### Chemical nature

crop protection product, fungicide, suspension concentrate (SC)

#### Hazardous ingredients

Metrafenone

Content (W/W): 42.6 %  
CAS Number: 220899-03-6

1,2-benzisothiazol-3(2H)-one

Content (W/W): < 0.05 %  
CAS Number: 2634-33-5  
Hazard symbol(s): Xn, N  
R-phrases: 22, 38, 41, 43, 50

The wording of the hazard symbols and R-phrases is specified in section 16 if dangerous ingredients are mentioned.

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### 4. First-Aid Measures

General advice:

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Wash thoroughly with soap and water.

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

On ingestion:

Rinse mouth and then drink plenty of water.

Note to physician:

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

Treatment: Symptomatic treatment (decontamination, vital functions).

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### 5. Fire-Fighting Measures

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

Specific hazards:

carbon monoxide, carbon dioxide, halogenated hydrocarbons, Dibenzofuran, nitrogen oxides, Bromine compounds, hydrocarbons, brominated dibenzodioxins  
The substances/groups of substances mentioned can be released in case of fire.

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations. In case of fire and/or explosion do not breathe fumes. Keep containers cool by spraying with water if exposed to fire.

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## 6. Accidental Release Measures

Personal precautions:

Do not breathe vapour/spray. Use personal protective clothing. Avoid contact with the skin, eyes and clothing.

Environmental precautions:

Do not discharge into drains/surface waters/groundwater. Do not discharge into the subsoil/soil.

Methods for cleaning up or taking up:

For small amounts: Pick up with suitable absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations. Collect waste in suitable containers, which can be labeled and sealed. Clean contaminated floors and objects thoroughly with water and detergents, observing environmental regulations.

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## 7. Handling and Storage

### Handling

No special measures necessary if stored and handled correctly. Ensure thorough ventilation of stores and work areas. When using do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift.

Protection against fire and explosion:

No special precautions necessary. The substance/product is non-combustible. Product is not explosive.

### Storage

Segregate from foods and animal feeds.

Further information on storage conditions: Keep away from heat. Protect from direct sunlight.

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## 8. Exposure controls and personal protection

### Components with occupational exposure limits

no exposure standard allocated

### Personal protective equipment

Respiratory protection:

Respiratory protection not required.

Hand protection:

Suitable chemical resistant safety gloves (EN 374) also with prolonged, direct contact

(Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) and other

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:

The statements on personal protective equipment in the instructions for use apply when handling crop-protection agents in final-consumer packing. Wearing of closed work clothing is recommended. Store work clothing separately. Keep away from food, drink and animal feeding stuffs.

## 9. Physical and Chemical Properties

Form:	suspension	
Colour:	beige	
Odour:	aliphatic	
pH value:	approx. 7 - 9 (water, 20 °C) (measured with the undiluted substance)	
Melting point:	approx. 0 °C Information applies to the solvent.	
Boiling point:	approx. 100 °C Information applies to the solvent.	
Flash point:		(Directive 92/69/EEC, A.9)
Flammability:	Non-flammable. not highly flammable	(calculated)

Lower explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Upper explosion limit:	As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.	
Ignition temperature:	379 °C	(Directive 92/69/EEC, A.15)
Explosion hazard:	not explosive	(Directive 92/69/EEC, A.14)
Fire promoting properties:	not fire-propagating	(Directive 2004/73/EC, A.21)
Vapour pressure:	approx. 23 hPa (20 °C) Information applies to the solvent.	
Density:	approx. 1.19 g/cm <sup>3</sup> (20 °C)	
Relative vapour density (air):	not determined	
Solubility in water:	dispersible	
Partitioning coefficient n-octanol/water (log Pow):	not applicable	
Viscosity, dynamic:	approx. 129 mPa.s (20 °C)	

**Other Information:**

If necessary, information on other physical and chemical parameters is indicated in this section.

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## 10. Stability and Reactivity

**Conditions to avoid:**

See MSDS section 7 - Handling and storage.

Thermal decomposition: 205 °C, 30 kJ/kg (DSC (OECD 113))

Thermal decomposition: 290 °C, 750 kJ/kg (DSC (OECD 113))

**Substances to avoid:**

strong acids, strong bases, strong oxidizing agents

**Hazardous reactions:**

No hazardous reactions if stored and handled as prescribed/indicated.

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

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## 11. Toxicological Information

### Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

LD50 rat (oral): > 5,000 mg/kg (OECD Guideline 401)

LC50 rat (by inhalation): > 3.7 mg/l 4 h (OECD Guideline 403)

No mortality was observed. Highest concentration capable of testing. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. An aerosol was tested.

LD50 rat (dermal): > 5,000 mg/kg (OECD Guideline 402)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Irritation

Assessment of irritating effects:

Not irritating to the skin. Not irritating to the eyes.

Primary skin irritation rabbit: non-irritant (OECD Guideline 404)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Primary irritations of the mucous membrane rabbit: non-irritant (OECD Guideline 405)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential.

Guinea pig maximization test guinea pig: Skin sensitizing effects were not observed in animal studies. (OECD Guideline 406)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Repeated dose toxicity

Assessment of repeated dose toxicity:

The product has not been tested. The statement has been derived from the properties of the individual components. No substance-specific organotoxicity was observed after repeated administration to animals.

### Genetic toxicity

**Assessment of mutagenicity:**

The product has not been tested. The statement has been derived from the properties of the individual components. Mutagenicity tests revealed no genotoxic potential.

**Carcinogenicity****Assessment of carcinogenicity:**

The product has not been tested. The statement has been derived from the properties of the individual components.

**Information on: Metrafenone****Assessment of carcinogenicity:**

When given in high doses, the substance was carcinogenic in animal studies. Based on its mechanism of action, a carcinogenic potential is not expected after exposure to low doses.

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**Reproductive toxicity****Assessment of reproduction toxicity:**

The product has not been tested. The statement has been derived from the properties of the individual components. The results of animal studies gave no indication of a fertility impairing effect.

**Developmental toxicity****Assessment of teratogenicity:**

The product has not been tested. The statement has been derived from the properties of the individual components. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

**Other relevant toxicity information**

Misuse can be harmful to health.

The product contains: 1,2-benzisothiazol-3(2H)-one  
May produce an allergic reaction.

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**12. Ecological Information****Ecotoxicity****Assessment of aquatic toxicity:**

Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

**Toxicity to fish:**

LC50 (96 h) > 104 mg/l, *Oncorhynchus mykiss* (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Aquatic invertebrates:**

LC50 (48 h) > 1.98 mg/l, *Daphnia magna* (Directive 92/69/EEC, C.2, static)

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The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Aquatic plants:

EC50 (72 h) > 2.25 mg/l, *Selenastrum capricornutum* (OECD Guideline 201)

The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### **Mobility**

Assessment transport between environmental compartments:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Metrafenone

Assessment transport between environmental compartments:

Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.

### **Persistence and degradability**

Assessment biodegradation and elimination (H<sub>2</sub>O):

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Metrafenone

Assessment biodegradation and elimination (H<sub>2</sub>O):

Not readily biodegradable (by OECD criteria).

### **Bioaccumulation potential**

Assessment bioaccumulation potential:

The product has not been tested. The statement has been derived from the properties of the individual components.

Information on: Metrafenone

Bioaccumulation potential:

Bioconcentration factor: 140 - 180 (42 d), *Lepomis macrochirus* (OECD Guideline 305 E)

Accumulation in organisms is not to be expected.

### **Additional information**

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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## **13. Disposal Considerations**

Must be sent to a suitable incineration plant, observing local regulations.



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Contaminated packaging:  
Contaminated packaging should be emptied as far as possible and disposed of in the same manner as the substance/product.

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## 14. Transport Information

### Domestic transport:

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (contains METRAFENONE 42%)

### Further information

Hazchem Code:3Z  
IERG Number:47

### Sea transport

IMDG

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Marine pollutant: YES  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (contains METRAFENONE 42%)

### Air transport

IATA/ICAO

Hazard class: 9  
Packing group: III  
ID number: UN 3082  
Hazard label: 9, EHSM  
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,  
N.O.S. (contains METRAFENONE 42%)

### Further information

Environmentally Hazardous Substances meeting the description of UN 3077 or UN 3082 are not subjected to the Australian Dangerous Goods Code when transported by road or rail in packagings not exceeding 500 Kg or 500 L.

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## 15. Regulatory Information

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Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) (Australia):

Poisons Schedule: Drugs & Poisons, Schedule 5

Hazard symbol(s)

N Dangerous for the environment.

R-phrases

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases

S2 Keep out of the reach of children.

S13 Keep away from food, drink and animal feeding stuffs.

S20/21 When using do not eat, drink or smoke.

S29 Do not empty into drains.

S35 This material and its container must be disposed of in a safe way.

S57 Use appropriate container to avoid environmental contamination.

### Other regulations

For the user of this plant-protective product applies: 'To avoid risks to man and the environment, comply with the instructions for use.' (Directive 1999/45/EC, Article 10, No. 1.2)

### **Registration status:**

AICS, AU blocked / not listed  
 APVMA 63487

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## 16. Other Information

Full text of hazard symbols and R-phrases if mentioned as hazardous components in section 3:

Xn	Harmful.
N	Dangerous for the environment.
22	Harmful if swallowed.
38	Irritating to skin.
41	Risk of serious damage to eyes.
43	May cause sensitization by skin contact.
50	Very toxic to aquatic organisms.

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Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.