

# Safety data sheet

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 26.09.2016

Version: 1.0

Product: **Vivando® 500**

(ID no. 30644947/SDS\_CPA\_IL/EN)

Date of print 24.09.2019

## 1. Identification

### Product identifier

**Vivando® 500**

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

Relevant identified uses: crop protection product, fungicide

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

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Crop Protection

Telephone: +49 621 60-27777

E-mail address: Produktinformation-Pflanzenschutz@basf.com

### Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

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## 2. Hazards Identification

### Classification of the substance or mixture

According to UN GHS criteria

Aquatic Chronic 2

For the classifications not written out in full in this section the full text can be found in section 16.

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## Label elements

### Globally Harmonized System (GHS)

Pictogram:



Hazard Statement:

H411

Toxic to aquatic life with long lasting effects.

Precautionary Statements (Response):

P391

Collect spillage.

Precautionary Statements (Disposal):

P501

Dispose of contents/container to hazardous or special waste collection point.

## Other hazards

### According to UN GHS criteria

See section 12 - Results of PBT and vPvB assessment.

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

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## 3. Composition/Information on Ingredients

### Substances

Not applicable

### Mixtures

#### Chemical nature

crop protection product, fungicide, suspension concentrate (SC)

#### Hazardous ingredients (GHS)

According to UN GHS criteria

Metrafenone

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Content (W/W): 42 %  
CAS Number: 220899-03-6Aquatic Acute 1  
Aquatic Chronic 2  
H400, H411

sodium alkylnaphthalene sulphonate, formaldehyde condensate

Content (W/W): &lt; 5 %

Eye Dam./Irrit. 2A  
H319

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

Content (W/W): &lt; 0,05 %

CAS Number: 2634-33-5

EC-Number: 220-120-9

INDEX-Number: 613-088-00-6

Acute Tox. 4 (oral)

Skin Corr./Irrit. 2

Eye Dam./Irrit. 1

Skin Sens. 1

Aquatic Acute 1

M-factor acute: 10

H318, H315, H302, H317, H400

Specific concentration limit:

Skin Sens. 1: &gt;= 0,05 %

Propane-1,2-diol

Content (W/W): &lt; 5 %

CAS Number: 57-55-6

EC-Number: 200-338-0

For the classifications not written out in full in this section the full text can be found in section 16.

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## 4. First-Aid Measures

### Description of first aid measures

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.

**Most important symptoms and effects, both acute and delayed**

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.

**Indication of any immediate medical attention and special treatment needed**

Treatment: Symptomatic treatment (decontamination, vital functions).

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**5. Fire-Fighting Measures****Extinguishing media**

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

**Special hazards arising from the substance or mixture**

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.

**Advice for fire-fighters**

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, protective equipment and emergency procedures**

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 and material for containment and cleaning 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.

**Reference to other sections**

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Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

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## 7. Handling and Storage

### Precautions for safe 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.

### Conditions for safe storage, including any incompatibilities

Segregate from foods and animal feeds.

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

Storage stability:

Storage duration: 60 Months

Protect from temperatures below: 0 °C

The product can crystallize below the limit temperature.

Protect from temperatures above: 35 °C

Changes in the properties of the product may occur if substance/product is stored above indicated temperature for extended periods of time.

### Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

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## 8. Exposure Controls/Personal Protection

### Control parameters

#### Components with occupational exposure limits

No occupational exposure limits known.

### Exposure controls

#### Personal protective equipment

Respiratory protection:

Respiratory protection not required.

Hand protection:

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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) etc.

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

### Information on basic physical and chemical properties

Form:	suspension	
Colour:	beige	
Odour:	aliphatic	
Odour threshold:	Not determined due to potential health hazard by inhalation.	
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:	Non-flammable.	(Directive 92/69/EEC, A.9)
Evaporation rate:	not applicable	
Flammability:	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.	

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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)

Vapour pressure:

approx. 23 hPa  
(20 °C)

Density:

Information applies to the solvent.  
approx. 1,19 g/cm<sup>3</sup>  
(20 °C)

Relative vapour density (air):

not applicable

Solubility in water:

dispersible

Partitioning coefficient n-octanol/water (log Kow):

not applicable

Thermal decomposition:

205 °C, 30 kJ/kg (DSC (OECD 113))  
290 °C, 750 kJ/kg (DSC (OECD 113))

Not a substance liable to self-decomposition according to UN transport regulations, class 4.1.

Viscosity, dynamic:

approx. 129 mPa.s  
(20 °C)

Explosion hazard:

not explosive

(Directive 92/69/EEC, A.14)

Fire promoting properties:

not fire-propagating

(Directive 2004/73/EC, A.21)

**Other information**

Other Information:

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

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**10. Stability and Reactivity****Reactivity**

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

**Chemical stability**

The product is stable if stored and handled as prescribed/indicated.

**Possibility of hazardous reactions**

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

**Conditions to avoid**

See MSDS section 7 - Handling and storage.

**Incompatible materials**

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Substances to avoid:  
strong acids, strong bases, strong oxidizing agents

### **Hazardous decomposition products**

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

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## **11. Toxicological Information**

### **Information on toxicological effects**

#### Acute toxicity

Assessment of acute toxicity:  
Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact.

Experimental/calculated data:  
LD50 rat (oral): > 5.000 mg/kg (OECD Guideline 401)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

LC50 rat (by inhalation): > 3,7 mg/l 4 h (OECD Guideline 403)  
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition. No mortality was observed. Highest concentration capable of testing. An aerosol was tested.

LD50 rat (dermal): > 5.000 mg/kg (OECD Guideline 402)

#### Irritation

Assessment of irritating effects:  
Not irritating to the skin. Not irritating to the eyes.

Experimental/calculated data:  
Skin corrosion/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.

Serious eye damage/irritation rabbit: non-irritant (OECD Guideline 405)

#### Respiratory/Skin sensitization

Assessment of sensitization:  
There is no evidence of a skin-sensitizing potential.

Experimental/calculated data:



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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.

#### Germ cell mutagenicity

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.

#### Specific target organ toxicity (single exposure)

Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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

#### Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

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.

### Aspiration hazard

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

No aspiration hazard expected.

### Other relevant toxicity information

Misuse can be harmful to health.

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## 12. Ecological Information

### **Toxicity**

Assessment of aquatic toxicity:

Toxic to aquatic life with long lasting effects.

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

Toxicity to fish:

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

Aquatic invertebrates:

LC50 (48 h) > 1,98 mg/l, *Daphnia magna* (Directive 92/69/EEC, C.2, static)

No effects at the highest test concentration.

Aquatic plants:

EC50 (72 h) > 2,25 mg/l, *Selenastrum capricornutum* (OECD Guideline 201)

No effects at the highest test concentration.

No observed effect concentration (72 h) 0,294 mg/l, *Pseudokirchneriella subcapitata* (OECD Guideline 201)

### **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).*

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### **Bioaccumulative potential**

Assessment bioaccumulation potential:

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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)*  
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## **Mobility in soil**

Assessment transport between environmental compartments:

Adsorption in soil: 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:**Adsorption in soil: Following exposure to soil, adsorption to solid soil particles is probable, therefore contamination of groundwater is not expected.*  
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## **Results of PBT and vPvB assessment**

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

## **Other adverse effects**

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

## **Additional information**

Other ecotoxicological advice:

Do not discharge product into the environment without control.

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# **13. Disposal Considerations**

## **Waste treatment methods**

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

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

### Land transport

#### ADR

UN number UN3082  
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains METRAFENONE)  
Transport hazard class(es): 9, EHSM  
Packing group: III  
Environmental hazards: yes  
Special precautions for user: Tunnel code: E

#### RID

UN number UN3082  
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains METRAFENONE)  
Transport hazard class(es): 9, EHSM  
Packing group: III  
Environmental hazards: yes  
Special precautions for user: None known

### Inland waterway transport

#### ADN

UN number UN3082  
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains METRAFENONE)  
Transport hazard class(es): 9, EHSM  
Packing group: III  
Environmental hazards: yes  
Special precautions for user: None known

### Transport in inland waterway vessel

Not evaluated

### Sea transport

#### IMDG

UN number: UN 3082  
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains METRAFENONE)

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Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
	Marine pollutant: YES
Special precautions for user:	None known

**Air transport**

IATA/ICAO

UN number:	UN 3082
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains METRAFENONE)
Transport hazard class(es):	9, EHSM
Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

**UN number**

See corresponding entries for "UN number" for the respective regulations in the tables above.

**UN proper shipping name**

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

**Transport hazard class(es)**

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

**Packing group**

See corresponding entries for "Packing group" for the respective regulations in the tables above.

**Environmental hazards**

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

**Special precautions for user**

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

**Transport in bulk according to Annex II of MARPOL and the IBC Code**

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated

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Ship Type:

Not evaluated

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## 15. Regulatory Information

### **Safety, health and environmental regulations/legislation specific for the substance or mixture**

To avoid risks to man and the environment, comply with the instructions for use.

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## 16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Aquatic Chronic	Hazardous to the aquatic environment - chronic
Aquatic Acute	Hazardous to the aquatic environment - acute
Eye Dam./Irrit.	Serious eye damage/eye irritation
Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Skin Sens.	Skin sensitization
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H319	Causes serious eye irritation.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.

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. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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