

Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 09.05.2017

Version: 1.0

Product: **VIVANDO**

(ID no. 30211625/SDS_CPA_GB/EN)

Date of print 10.05.2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

VIVANDO

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

Relevant identified uses: crop protection product, fungicide

1.3. Details of the supplier of the safety data sheet

Company:BASF SE
67056 Ludwigshafen
GERMANYContact address:BASF plc
PO Box 4, Earl Road, Cheadle Hulme,
Cheadle, Cheshire
SK8 6QG, UNITED KINGDOM

Telephone: +44 161 485-6222

E-mail address: product-safety-north@basf.com

1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Aquatic Chronic 2

H411, EUH401

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

2.2. Label elements

Globally Harmonized System (GHS) in accordance with UK regulations.

Pictogram:



Hazard Statement:

H411

Toxic to aquatic life with long lasting effects.

EUH401

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

Precautionary Statement:

P101

If medical advice is needed, have product container or label at hand.

P102

Keep out of reach of children.

Precautionary Statements (Response):

P391

Collect spillage.

Precautionary Statements (Disposal):

P501

Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Labeling of special preparations (GHS):

EUH208: May produce an allergic reaction. Contains: 1,2-BENZISOTHIAZOL-3(2H)-ONE

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

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.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

crop protection product, fungicide, suspension concentrate (SC)

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

Metrafenone

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

sodium alkylnaphthalene sulphonate, formaldehyde condensate

| | |
|----------------------|---------------------------|
| Content (W/W): < 5 % | Eye Dam./Irrit. 2 H319 |
|----------------------|---------------------------|

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

| | |
|----------------------------|------------------------------|
| Content (W/W): < 0.05 % | Acute Tox. 4 (oral) |
| CAS Number: 2634-33-5 | Skin Corr./Irrit. 2 |
| EC-Number: 220-120-9 | Eye Dam./Irrit. 1 |
| INDEX-Number: 613-088-00-6 | Skin Sens. 1 |
| | Aquatic Acute 1 |
| | M-factor acute: 10 |
| | H318, H315, H302, H317, H400 |

Specific concentration limit:

Skin Sens. 1: >= 0.05 %

Propane-1,2-diol

| |
|---------------------------------------------|
| Content (W/W): < 5 % |
| CAS Number: 57-55-6 |
| EC-Number: 200-338-0 |
| REACH registration number: 01-2119456809-23 |

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Remove contaminated clothing.

Show container, label and/or safety data sheet to physician.

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:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

4.2. 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.

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

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

water spray, carbon dioxide, foam, dry powder

5.2. 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.

5.3. 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.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

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

6.2. Environmental precautions

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

Do not allow contamination of public drains or surface or ground waters. Inform local water plc if spillage enters drains and the Environment Agency (England & Wales), the Scottish Environmental Protection Agency (Scotland), or the Environment and Heritage Service (Northern Ireland) if it enters surface or ground waters. Keep people and animals away.

6.3. 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.

6.4. Reference to other sections

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

SECTION 7: Handling and Storage

7.1. 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.

7.2. 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.

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.

7.3. 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.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

57-55-6: Propane-1,2-diol

TWA value 10 mg/m³ (WEL/EH 40 (UK)), Particulate

TWA value 474 mg/m³ ; 150 ppm (WEL/EH 40 (UK)), Total vapour and particulates

Refer to the current edition of HSE Guidance Note EH40 Occupational Exposure Limits (United Kingdom). For normal use and handling refer to the product label/leaflet.

8.2. Exposure controls

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) 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.

Environmental exposure controls

For information regarding environmental exposure controls, see Section 6.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

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| | | |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| 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 | |
| Boiling point: | Information applies to the solvent. approx. 100 °C | |
| 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. | |
| 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) Information applies to the solvent. | |
| Density: | approx. 1.19 g/cm ³ (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) | |

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Explosion hazard: not explosive
Fire promoting properties: not fire-propagating

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(Directive 92/69/EEC, A.14)
(Directive 2004/73/EC, A.21)

9.2. Other information

Other Information:

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

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

See MSDS section 7 - Handling and storage.

10.5. Incompatible materials

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

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological Information

11.1. 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:

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.

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 toxicityAssessment 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.

SECTION 12: Ecological Information**12.1. 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)

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):

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 (H₂O):

Not readily biodegradable (by OECD criteria).

12.3. Bioaccumulative 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)*

12.4. 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.

12.5. 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.

12.6. Other adverse effects

The product does not contain substances that are listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

12.7. Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

The UK Environmental Protection (Duty of Care) Regulations (EP) and amendments should be noted (United Kingdom).

This product and any uncleaned containers must be disposed of as hazardous waste in accordance with the 2005 Hazardous Waste Regulations and amendments (United Kingdom)

Contaminated packaging:

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

SECTION 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, EHS
Packing group: III
Environmental hazards: yes
Special precautions for user:

RID

UN number: UN3082
UN proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains METRAFENONE)
Transport hazard class(es): 9, EHS
Packing group: III

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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)
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

14.1. UN number

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

14.2. UN proper shipping name

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

14.3. Transport hazard class(es)

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

14.4. Packing group

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

14.5. Environmental hazards

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

14.6. Special precautions for user

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

14.7. 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 |
| Ship Type: | Not evaluated |

Further information

This product is subject to the most recent edition of "The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations" and their amendments (United Kingdom).

SECTION 15: Regulatory Information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

This product is classified under the European CLP Regulation. (United Kingdom)

The data should be considered when making any assessment under the Control of Substances Hazardous to Health Regulations (COSHH), and related guidance, for example, 'COSHH Essentials' (United Kingdom).

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This product may be subject to the Control of Major Accident Hazards Regulations (COMAH), and amendments if specific threshold tonnages are exceeded (United Kingdom).

15.2. Chemical Safety Assessment

Advice on product handling can be found in sections 7 and 8 of this safety data sheet.

SECTION 16: Other Information

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

Full text of the classifications, including the hazard classes and the 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 |
| H411 | Toxic to aquatic life with long lasting effects. |
| EUH401 | To avoid risks to human health and the environment, comply with the instructions for use. |
| H400 | Very toxic to aquatic life. |
| 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. |

If you have any queries relating to this MSDS, its contents or any other product safety related questions, please write to the following e-mail address: product-safety-north@basf.com

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.

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