

# Safety Data Sheet

## Vivando SC Fungicide

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### 1. Identification

#### Product identifier used on the label

## Vivando SC Fungicide

#### Recommended use of the chemical and restriction on use

Recommended use\*: crop protection product, fungicide

\* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

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

Company:  
BASF CORPORATION  
100 Park Avenue  
Florham Park, NJ 07932, USA

Contact address:  
BASF Canada Inc.  
100 Milverton Drive  
Mississauga, ON L5R 4H1  
CANADA  
Telephone: +1 289 360-1300

#### Emergency telephone number

#### 24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300  
BASF HOTLINE: (800) 454-COPE (2673)

#### Other means of identification

Molecular formula: C<sub>19</sub>H<sub>21</sub>BrO<sub>5</sub>  
PCP # 29765  
Synonyms: metrafenone

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### 2. Hazards Identification

#### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

#### Classification of the product

Skin Sens.	1	Skin sensitization
Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic

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### Label elements

Pictogram:



Signal Word:

Warning

Hazard Statement:

H317 May cause an allergic skin reaction.  
H411 Toxic to aquatic life with long lasting effects.  
H400 Very toxic to aquatic life.

Precautionary Statements (Prevention):

P280 Wear protective gloves.  
P261 Avoid breathing mist or vapour or spray.  
P273 Avoid release to the environment.  
P272 Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statements (Response):

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P333 + P313 If skin irritation or rash occurs: Get medical attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.

Precautionary Statements (Disposal):

P501 Dispose of contents/container in accordance with local regulations.

### Hazards not otherwise classified

Labeling of special preparations (GHS):

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

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## 3. Composition / Information on Ingredients

### According to Hazardous Products Regulations (HPR) (SOR/2015-17)

metrafenone

CAS Number: 220899-03-6

Content (W/W): 25.2 %

Synonym: Methanone, (3-bromo-6-methoxy-2-methylphenyl)(2,3,4-trimethoxy-6-methylphenyl)

D-Glucopyranose, oligomers, decyl octyl glycosides

CAS Number: 68515-73-1

Content (W/W): 15.0 - 50.0%

Synonym: No data available.

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

CAS Number: 2634-33-5

Content (W/W): < 0.1%

Synonym: No data available.

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### 4. First-Aid Measures

#### Description of first aid measures

##### General advice:

First aid providers should wear personal protective equipment to prevent exposure. Remove contaminated clothing. Move person to fresh air. If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. In case of intoxication, call a poison control center or physician for treatment advice, taking the packaging or the label of the product.

##### If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

##### If on skin:

Rinse skin immediately with plenty of water for 15 - 20 minutes.

##### If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing.

##### If swallowed:

Rinse mouth and then drink 200-300 ml of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

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

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

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

##### Note to physician

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

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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

Hazards during fire-fighting:  
carbon monoxide, carbon dioxide, hydrogen bromide, nitrogen oxides, sulfur oxides, halogenated compounds, silica compounds, lead oxides  
The substances/groups of substances mentioned can be released in case of fire.

#### Advice for fire-fighters

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Protective equipment for fire-fighting:

Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

### Further information:

Evacuate area of all unnecessary personnel. Contain contaminated water/firefighting water. Do not allow to enter drains or waterways.

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## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Take appropriate protective measures. Clear area. Shut off source of leak only under safe conditions. Extinguish sources of ignition nearby and downwind. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

### Environmental precautions

Do not discharge into the subsoil/soil. Do not discharge into drains/surface waters/groundwater. Contain contaminated water/firefighting water.

### Methods and material for containment and cleaning up

Dike spillage. Pick up with suitable absorbent material. Place into suitable containers for reuse or disposal in a licensed facility. Spilled substance/product should be recovered and applied according to label rates whenever possible. If application of spilled substance/product is not possible, then spills should be contained, solidified, and placed in suitable containers for disposal. After decontamination, spill area can be washed with water. Collect wash water for approved disposal.

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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 only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect containers from physical damage. Protect against contamination. The authority permits and storage regulations must be observed.

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## 8. Exposure Controls/Personal Protection

**Users of a pesticidal product should refer to the product label for personal protective equipment requirements.**

No occupational exposure limits known.

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### Advice on system design:

Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

### Personal protective equipment

#### Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator. For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), use NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

#### Hand protection:

Chemical resistant protective gloves, Protective glove selection must be based on the user's assessment of the workplace hazards.

#### Eye protection:

Safety glasses with side-shields. Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

#### Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

#### 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. Keep away from food, drink and animal feeding stuffs. Store work clothing separately.

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## 9. Physical and Chemical Properties

Form:	liquid
Odour:	aliphatic
Odour threshold:	Not determined due to potential health hazard by inhalation.
Colour:	beige
pH value:	approx. 6 - 8 ( 20 °C)
Melting temperature:	approx. 0 °C Information applies to the solvent.
Boiling point:	approx. 100 °C Information applies to the solvent.
Flash point:	Non-flammable.
Flammability:	not flammable
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.
Autoignition:	approx. 379 °C The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
Vapour pressure:	approx. 23 hPa ( 20 °C) Information applies to the solvent.
Density:	approx. 1.19 g/cm <sup>3</sup> ( 20 °C)
Vapour density:	not applicable
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	616 mPa.s ( 20 °C)
Solubility in water:	dispersible
Evaporation rate:	not applicable
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

## 10. Stability and Reactivity

### Reactivity

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

Corrosion to metals:

Corrosive effects to metal are not anticipated.

Oxidizing properties:

Not an oxidizer.

not fire-propagating

### 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 SDS section 7 - Handling and storage.

### Incompatible materials

strong acids, strong bases, strong oxidizing agents

### Hazardous decomposition products

Decomposition products:

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

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Thermal decomposition:  
No decomposition if stored and handled as prescribed/indicated.

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## 11. Toxicological information

### Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### Acute Toxicity/Effects

#### Acute toxicity

Assessment of acute toxicity: Virtually nontoxic after a single skin contact. Virtually nontoxic by inhalation. Virtually nontoxic after a single ingestion. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Oral

Type of value: LD50  
Species: rat (male/female)  
Value: > 5,000 mg/kg  
No mortality was observed.

#### Inhalation

Type of value: LC50  
Species: rat (male/female)  
Value: > 3.1 mg/l  
Exposure time: 4 h  
No mortality was observed.

#### Dermal

Type of value: LD50  
Species: rat (male/female)  
Value: > 5,000 mg/kg

#### Assessment other acute effects

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

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

#### Irritation / corrosion

Assessment of irritating effects: May cause slight irritation to the eyes. Not irritating to the skin. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

#### Skin

Species: rabbit  
Result: non-irritant

#### Eye

Species: rabbit  
Result: Slightly irritating.

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### Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### Buehler test

Species: guinea pig

Result: Non-sensitizing.

### Aspiration Hazard

The product has not been tested. The statement has been derived from the properties of the individual components. No aspiration hazard expected.

## Chronic Toxicity/Effects

### 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.

### Teratogenicity

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.

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## 12. Ecological Information

### Toxicity

#### Aquatic toxicity

Assessment of aquatic toxicity:

Acutely harmful for aquatic invertebrates. Acutely harmful for fish. Acutely toxic for aquatic plants.

#### Toxicity to fish

LC50 (96 h) > 94 mg/l, *Oncorhynchus mykiss* (OECD Guideline 203, static)



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### Aquatic invertebrates

EC50 (48 h) 20 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

### Aquatic plants

EC50 (72 h) 21 mg/l (growth rate), algae (OECD Guideline 201, static)

No observed effect concentration (72 h) 0.76 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

### Assessment of terrestrial toxicity

With high probability not acutely harmful to terrestrial organisms.

## **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.

### Assessment biodegradation and elimination (H2O)

*Information on: metrafenone*

*Not readily biodegradable (by OECD criteria).*

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## **Bioaccumulative potential**

### Assessment bioaccumulation potential

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

### Bioaccumulation potential

*Information on: metrafenone*

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

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## **Mobility in soil**

### 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*

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

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## **Additional information**

Other ecotoxicological advice:

The ecological data given are those of the active ingredient. Do not release untreated into natural waters.

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### 13. Disposal considerations

**Waste disposal of substance:**

See product label for disposal and recycling instructions.

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### 14. Transport Information

**Land transport**

TDG

Not classified as a dangerous good under transport regulations

**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)

**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)

**Further information**

Product may be shipped as non-hazardous in suitable packages containing a net quantity of 5 L or less under the provisions of various regulatory agencies: ADR, RID, ADN: Special Provision 375; IMDG: 2.10.2.7; IATA: A197; TDG: Special Provision 99(2); 49CFR: §171.4 (c) (2).

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### 15. Regulatory Information

**Federal Regulations**

**Registration status:**

Crop Protection DSL, CA released / exempt

Chemical DSL, CA blocked / not listed

**NFPA Hazard codes:**

Health: 1 Fire: 1 Reactivity: 1 Special:

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### Labeling requirements under Pest Control Products Act

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product registered by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:

CAUTION:

Eye irritant.

Contains 1,2-benzisothiazolin-3-one as a preservative.

KEEP OUT OF REACH OF CHILDREN.

MAY CAUSE EYE IRRITATION.

Avoid contact with the skin, eyes and clothing.

Wash thoroughly after handling.

There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

## 16. Other Information

### SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2021/01/07

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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