

**CIRCADEN® 200 SC**

|         |                |             |                                 |
|---------|----------------|-------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: -           |
| 2.0     | 21.02.2022     | 50000117    | Date of first issue: 19.02.2019 |

---

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

**Product name** CIRCADEN® 200 SC

**Other means of identification**

**Product code** 50000117

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

Use of the Sub-stance/Mixture : Insecticide

Recommended restrictions on use : Use as recommended by the label.

**1.3 Details of the supplier of the safety data sheet****Supplier Address**

FMC Chemicals (Pty) Ltd  
Company Registration Number: 1988/001451/07  
West End Office Park, Building C  
Cnr. West Ave & Hall Street  
Centurion, 0014

E-mail address: SDS-Info@fmc.com (E-Mail General Information)

**1.4 Emergency telephone**

For leak, fire, spill or accident emergencies, call:  
South Africa: 0-800-983-611 (CHEMTREC)

Medical emergency:  
For any emergency or poisoning contact: Griffon Poison Information Centre (24 hrs) - +27-(0)-82-446-8946

---

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Acute toxicity, Category 4 H332: Harmful if inhaled.

Short-term (acute) aquatic hazard, Category 4 H400: Very toxic to aquatic life.

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

gory 1

Long-term (chronic) aquatic hazard, Category 1

H410: Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labeling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H332 Harmful if inhaled.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

#### Prevention:

P261 Avoid breathing mist or vapors.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.

#### Response:

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P391 Collect spillage.

#### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

#### Additional Labeling

EUH208 Contains reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

#### Components

| Chemical name    | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification   | Concentration<br>(% w/w) |
|------------------|---|------------------|--------------------------|
| Cyantraniliprole | 736994-63-1   | Aquatic Acute 1; | >= 10 - < 20             |

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

|   |                            |  |                          |
|---|----------------------------|--|--------------------------|
|   |                            | H400<br>Aquatic Chronic 1;<br>H410   |                          |
| palygorskite  | 12174-11-7                 |  | $\geq 0.1 - < 1$         |
| reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) | 55965-84-9<br>613-167-00-5 | Acute Tox. 3; H301<br>Acute Tox. 2; H330<br>Acute Tox. 2; H310<br>Skin Corr. 1C;<br>H314<br>Eye Dam. 1; H318<br>Skin Sens. 1A;<br>H317<br>Aquatic Acute 1;<br>H400<br>Aquatic Chronic 1;<br>H410 | $\geq 0.0002 - < 0.0015$ |
| Substances with a workplace exposure limit :  |                            |  |                          |
| propane-1,2-diol  | 57-55-6<br>200-338-0       |  | $\geq 1 - < 10$          |

For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first-aid measures

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Consult a physician after significant exposure.  
If unconscious, place in recovery position and seek medical advice.
- In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.

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

- Risks : Harmful if inhaled.

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

- Treatment : Treat symptomatically.

|         |                |             |                                 |
|---------|----------------|-------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: -           |
| 2.0     | 21.02.2022     | 50000117    | Date of first issue: 19.02.2019 |

---

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : Dry chemical, CO<sub>2</sub>, water spray or regular foam.
- Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.

#### 5.2 Special hazards arising from the substance or mixture

- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Halogenated compounds  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides

#### 5.3 Advice for firefighters

- Special protective equipment for fire-fighters : Firefighters should wear protective clothing and self-contained breathing apparatus.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

---

### SECTION 6: Accidental release measures

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

- Personal precautions : Use personal protective equipment.  
Ensure adequate ventilation.

#### 6.2 Environmental precautions

- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

- Methods for cleaning up : 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

See sections: 7, 8, 11, 12 and 13.

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

- Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapors/dust.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.
- Advice on protection against fire and explosion : Normal measures for preventive fire protection.
- Hygiene measures : When using do not eat or drink. When using do not smoke.  
Wash hands before breaks and at the end of workday. Avoid contact with skin, eyes and clothing. Provide adequate ventilation.

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

- Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.
- Further information on storage stability : No decomposition if stored and applied as directed.

#### 7.3 Specific end use(s)

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

##### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

| Substance name   | End Use   | Routes of exposure | Potential health effects   | Value                  |
|--|-----------|--------------------|----------------------------|------------------------|
| propane-1,2-diol   | Workers   | Inhalation         | Long-term systemic effects | 168 mg/m <sup>3</sup>  |
|  | Workers   | Inhalation         | Long-term local effects    | 10 mg/m <sup>3</sup>   |
|  | Consumers | Inhalation         | Long-term systemic effects | 50 mg/m <sup>3</sup>   |
|  | Consumers | Inhalation         | Long-term local effects    | 10 mg/m <sup>3</sup>   |
| reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and | Workers   | Inhalation         | Long-term local effects    | 0.02 mg/m <sup>3</sup> |

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
 Date of first issue: 19.02.2019

|                                    |           |            |                            |            |
|------------------------------------|-----------|------------|----------------------------|------------|
| 2-methyl-2H-isothiazol-3-one (3:1) |           |            |                            |            |
|                                    | Workers   | Inhalation | Acute local effects        | 0.04 mg/m3 |
|                                    | Consumers | Inhalation | Long-term local effects    | 0.02 mg/m3 |
|                                    | Consumers | Inhalation | Acute local effects        | 0.04 mg/m3 |
|                                    | Consumers | Oral       | Long-term systemic effects | 0.09 mg/kg |
|                                    | Consumers | Oral       | Acute systemic effects     | 0.11 mg/kg |

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

| Substance name  | Environmental Compartment | Value        |
|---|---------------------------|--------------|
| propane-1,2-diol  | Fresh water               | 260 mg/l     |
|   | Intermittent use/release  | 183 mg/l     |
|   | Sea water                 | 26 mg/l      |
|   | Sewage treatment plant    | 20 g/l       |
|   | Fresh water sediment      | 572 mg/kg    |
|   | Sea sediment              | 57.2 mg/kg   |
|   | Soil                      | 50 mg/kg     |
| reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1) | Fresh water               | 0.00339 mg/l |
|   | Intermittent use/release  | 0.00339 mg/l |
|   | Sea water                 | 0.00339 mg/l |
|   | Sewage treatment plant    | 0.23 mg/l    |
|   | Fresh water sediment      | 0.027 mg/kg  |
|   | Sea sediment              | 0.027 mg/kg  |

## 8.2 Exposure controls

### Personal protective equipment

- Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles
- Hand protection  
Material : Protective gloves
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.
- Protective measures : Plan first aid action before beginning work with this product.

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

### SECTION 9: Physical and chemical properties

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

|  |   |   |
|--|---|---|
| Appearance                                       | : | liquid                                      |
| Color  | : | off-white                                   |
| Odor   | : | odorless                                    |
| Odor Threshold                                   | : | No data available                           |
| pH   | : | 7.3<br>Concentration: 10 g/l                |
| Melting point/range                              | : | No data available                           |
| Boiling point/boiling range                      | : | No data available                           |
| Flash point                                      | : | No data available                           |
| Upper explosion limit / Upper flammability limit | : | No data available                           |
| Lower explosion limit / Lower flammability limit | : | No data available                           |
| Vapor pressure                                   | : | No data available                           |
| Density  | : | 1.08 g/cm <sup>3</sup><br>No data available |
| Solubility(ies)<br>Water solubility              | : | No data available                           |
| Partition coefficient: n-octanol/water           | : | No data available                           |
| Autoignition temperature                         | : | No data available                           |
| Decomposition temperature                        | : | No data available                           |
| Viscosity<br>Viscosity, dynamic                  | : | 474 mPa.s<br>50 rpm                         |
| Viscosity, kinematic                             | : | No data available                           |
| Explosive properties                             | : | Not explosive                               |
| Oxidizing properties                             | : | Non-oxidizing                               |

#### 9.2 Other information

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

|         |                |             |                                 |
|---------|----------------|-------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: -           |
| 2.0     | 21.02.2022     | 50000117    | Date of first issue: 19.02.2019 |

---

Self-ignition : >  
800 °C

---

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No decomposition if stored and applied as directed.

#### 10.2 Chemical stability

No decomposition if stored and applied as directed.

#### 10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

#### 10.4 Conditions to avoid

Conditions to avoid : Avoid extreme temperatures  
Avoid formation of aerosol.

No data available

#### 10.5 Incompatible materials

Materials to avoid : Avoid strong acids, bases, and oxidizers.

Not applicable

#### 10.6 Hazardous decomposition products

---

### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 425  
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50: > 3.7 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The component/mixture is moderately toxic after short term inhalation.

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity



# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

### **Components:**

#### **Cyantraniliprole:**

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 425
- Acute inhalation toxicity : LC50 (Rat): > 5.2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 402

#### **palygorskite:**

- Acute oral toxicity : Assessment: Toxic effects cannot be excluded
- Acute inhalation toxicity : Assessment: Toxic effects cannot be excluded
- Acute dermal toxicity : Assessment: Toxic effects cannot be excluded

#### **reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):**

- Acute oral toxicity : LD50 Oral (Rat, female): 200 mg/kg  
Method: OECD Test Guideline 423
- Acute inhalation toxicity : LC50 (Rat, male and female): 0.33 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: Corrosive to the respiratory tract.
- Acute dermal toxicity : LD50 (Rabbit, male): 87 mg/kg

#### **propane-1,2-diol:**

- Acute oral toxicity : LD50 (Rat, male and female): 22,000 mg/kg
- Acute inhalation toxicity : LC0 (Rabbit): 31.7 mg/l  
Exposure time: 2 h  
Test atmosphere: vapor  
Remarks: no mortality
- Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg  
Assessment: The substance or mixture has no acute dermal toxicity

### **Skin corrosion/irritation**

#### **Product:**

- Assessment : Not classified as irritant

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

Method : OECD Test Guideline 404  
Result : No skin irritation

### Components:

#### **Cyantraniliprole:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

#### **palygorskite:**

Remarks : No data available

#### **reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):**

Method : OECD Test Guideline 404  
Result : Corrosive after 1 to 4 hours of exposure

#### **propane-1,2-diol:**

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation

### **Serious eye damage/eye irritation**

#### Product:

Assessment : Not classified as irritant  
Method : OECD Test Guideline 405  
Result : No eye irritation

### Components:

#### **Cyantraniliprole:**

Species : Rabbit  
Assessment : Not classified as irritant  
Method : OECD Test Guideline 405  
Result : No eye irritation  
Remarks : Minimal effects that do not meet the threshold for classification.

#### **reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):**

Result : Irreversible effects on the eye

#### **propane-1,2-diol:**

Species : Rabbit  
Method : OECD Test Guideline 405  
Result : No eye irritation

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

### Respiratory or skin sensitization

#### Product:

Assessment : Not a skin sensitizer.  
Method : OECD Test Guideline 429

#### Components:

##### **Cyantraniliprole:**

Method : OECD Test Guideline 429  
Result : Does not cause skin sensitization.

##### **palygorskite:**

Remarks : No data available

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Test Type : Local lymph node assay (LLNA)  
Species : Mouse  
Result : The product is a skin sensitizer, sub-category 1A.

##### **propane-1,2-diol:**

Test Type : Maximization Test  
Species : Guinea pig  
Result : negative

### Germ cell mutagenicity

#### Components:

##### **Cyantraniliprole:**

Germ cell mutagenicity- Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

##### **propane-1,2-diol:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse  
Result: negative

### Carcinogenicity

#### Components:

##### **Cyantraniliprole:**

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

### propane-1,2-diol:

Species : Rat  
Application Route : Oral  
Exposure time : 2 Years  
Result : negative

### Reproductive toxicity

#### Components:

##### Cyantraniliprole:

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

##### propane-1,2-diol:

Effects on fertility : Test Type: reproductive and developmental toxicity study  
Species: Mouse  
Application Route: Oral  
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development  
Species: Mouse  
Application Route: Oral  
Method: OECD Test Guideline 414  
Result: Animal testing did not show any effects on fertility.  
Remarks: Based on data from similar materials

### STOT-single exposure

#### Components:

##### Cyantraniliprole:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

### STOT-repeated exposure

#### Components:

##### Cyantraniliprole:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### Repeated dose toxicity

#### Components:

##### Cyantraniliprole:

Species : Rat  
NOAEL : > 1,000 mg/kg  
Application Route : Oral  
Exposure time : 28 d  
Method : OECD Test Guideline 407

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

Symptoms : increased liver weight  
Remarks : Based on available data, the classification criteria are not met.

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Species : Dog  
NOAEL : 22 mg/kg  
Application Route : Oral

Species : Rat  
NOAEL : 16.3 - 24.7 mg/kg  
Application Route : Skin contact

Species : Rat  
NOAEL : 2.36 mg/m<sup>3</sup>  
Application Route : Inhalation

### propane-1,2-diol:

Species : Rat, male and female  
NOAEL : 1,700 mg/kg  
Application Route : Oral  
Exposure time : 2 Years

Species : Rat, male and female  
NOAEL : 1,000 mg/kg  
LOAEL : 160 mg/kg  
Application Route : Inhalation  
Exposure time : 90 Days

### Further information

#### Product:

Remarks : No data available

---

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 99 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.0421 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): > 66.3 mg/l  
Exposure time: 72 h

Toxicity to soil dwelling organisms : > 1,000 mg/kg  
Exposure time: 14 d  
Species: Eisenia fetida (earthworms)

---

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

Toxicity to terrestrial organisms : LD50: 2.18  
Exposure time: 96 h  
Species: *Apis mellifera* (bees)  
Remarks: Oral

LD50: 3.55  
Exposure time: 96 h  
Species: *Apis mellifera* (bees)  
Remarks: Contact

### Components:

#### **Cyantraniliprole:**

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 12.6 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0.0204 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): > 13 mg/l  
Exposure time: 72 h

ErC50 (*Lemna gibba* (duckweed)): > 12.1 mg/l  
Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC: 2.9 mg/l  
Exposure time: 28 d  
Species: *Cyprinodon variegatus* (sheepshead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.00656 mg/l  
Exposure time: 21 d  
Species: *Daphnia magna* (Water flea)

Toxicity to soil dwelling organisms : LC50: > 1,000 mg/kg  
Exposure time: 14 d  
Species: *Eisenia fetida* (earthworms)

Toxicity to terrestrial organisms : LD50: > 0.0934 µg/bee  
Exposure time: 48 h  
End point: Acute contact toxicity  
Species: *Apis mellifera* (bees)

LD50: > 0.1055 µg/bee  
Exposure time: 48 h  
End point: Acute oral toxicity  
Species: *Apis mellifera* (bees)

LD50: 2,250 mg/kg  
Species: *Colinus virginianus* (Bobwhite quail)

## CIRCADEN® 200 SC

|         |                |             |                                 |
|---------|----------------|-------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: -           |
| 2.0     | 21.02.2022     | 50000117    | Date of first issue: 19.02.2019 |

---

**palygorskite:****Ecotoxicology Assessment**

Acute aquatic toxicity : Toxic effects cannot be excluded

Chronic aquatic toxicity : Toxic effects cannot be excluded

**reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.19 mg/l  
Exposure time: 96 h  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.16 mg/l  
Exposure time: 48 h

NOEC (Daphnia magna (Water flea)): 0.1 mg/l  
Exposure time: 21 Days

EC50 (Daphnia magna (Water flea)): 0.18 mg/l  
Exposure time: 21 Days

Toxicity to algae/aquatic plants : NOEC (Skeletonema costatum (marine diatom)): 0.00049 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 201

NOEC (Skeletonema costatum (marine diatom)): 0.019 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

EC50 (Skeletonema costatum (marine diatom)): 0.037 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : NOEC (activated sludge): 0.91 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
GLP: yes

EC50 (activated sludge): 4.5 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
GLP: yes

Toxicity to fish (Chronic toxicity) : NOEC: 0.02 mg/l  
Exposure time: 35 d  
Species: Danio rerio (zebra fish)  
Method: OECD Test Guideline 210  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.1 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

Chronic Toxicity Value: 0.18 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)

### propane-1,2-diol:

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 40,613 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : (Mysidopsis bahia (opossum shrimp)): 18,800 mg/l  
Exposure time: 96 h
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 34,100 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC50 (Pseudomonas putida): > 20,000 mg/l  
Exposure time: 18 h
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 13,020 mg/l  
Exposure time: 7 d

## 12.2 Persistence and degradability

### Components:

#### **Cyantraniliprole:**

Biodegradability : Remarks: Not readily biodegradable.

#### **reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):**

Biodegradability : Result: Readily biodegradable.

#### **propane-1,2-diol:**

Biodegradability : Result: Readily biodegradable.  
Biodegradation: 23.6 %  
Exposure time: 64 d  
Method: OECD Test Guideline 306

## 12.3 Bioaccumulative potential

### Components:

#### **Cyantraniliprole:**

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)  
Bioconcentration factor (BCF): < 1  
Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-octanol/water : log Pow: 1.97 (22 °C)  
pH: 4



# SAFETY DATA SHEET



## CIRCADEN® 200 SC

|         |                |             |                                 |
|---------|----------------|-------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: -           |
| 2.0     | 21.02.2022     | 50000117    | Date of first issue: 19.02.2019 |

---

log Pow: 2.07 (22 °C)  
pH: 7

log Pow: 1.74 (22 °C)  
pH: 9

### reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1):

Bioaccumulation : Exposure time: 28 d  
Bioconcentration factor (BCF): < 54  
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : Pow: 0.75

### propane-1,2-diol:

Partition coefficient: n-octanol/water : log Pow: -1.07

## 12.4 Mobility in soil

### Components:

#### **Cyantraniliprole:**

Distribution among environmental compartments : Remarks: The product is not expected to be mobile in soils.

## 12.5 Results of PBT and vPvB assessment

Not relevant

## 12.6 Other adverse effects

### Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

|         |                |             |                                 |
|---------|----------------|-------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: -           |
| 2.0     | 21.02.2022     | 50000117    | Date of first issue: 19.02.2019 |

---

## SECTION 14: Transport information

### 14.1 UN number

**IMDG** : UN 3082  
**IATA** : UN 3082

### 14.2 UN proper shipping name

**IMDG** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Cyantraniliprole)

**IATA** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Cyantraniliprole)

### 14.3 Transport hazard class(es)

**IMDG** : 9  
**IATA** : 9

### 14.4 Packing group

**IMDG**  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F

**IATA (Cargo)**  
Packing instruction (cargo aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

**IATA (Passenger)**  
Packing instruction (passenger aircraft) : 964  
Packing instruction (LQ) : Y964  
Packing group : III  
Labels : Miscellaneous

### 14.5 Environmental hazards

**IMDG**  
Marine pollutant : yes

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version 2.0      Revision Date: 21.02.2022      SDS Number: 50000117      Date of last issue: -  
Date of first issue: 19.02.2019

---

### SECTION 15: Regulatory information

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

**The ingredients of this product are reported in the following inventories:**

|       |   |  |
|-------|---|--|
| TCSI  | : | On the inventory, or in compliance with the inventory  |
| TSCA  | : | Product contains substance(s) not listed on TSCA inventory.  |
| AIIC  | : | Not in compliance with the inventory   |
| DSL   | : | This product contains the following components that are not on the Canadian DSL nor NDSL.<br><br>3-BROMO-1-(3-CHLORO-2-PYRIDYL)-4'-CYAN-2'-METHYL-6'-(METHYLCARBAMOYL)-1H-PYRAZOLE-5-CARBOXANILIDE<br>ACTI-GEL 208 (ACTIVE MINERALS) |
| ENCS  | : | Not in compliance with the inventory   |
| ISHL  | : | Not in compliance with the inventory   |
| KECI  | : | Not in compliance with the inventory   |
| PICCS | : | Not in compliance with the inventory   |
| IECSC | : | Not in compliance with the inventory   |
| NZIoC | : | Not in compliance with the inventory   |
| TECI  | : | Not in compliance with the inventory   |

#### 15.2 Chemical Safety Assessment

---

### SECTION 16: Other information

**Full text of H-Statements**

|      |   |   |
|------|---|---|
| H301 | : | Toxic if swallowed.                                   |
| H310 | : | Fatal in contact with skin.                           |
| H314 | : | Causes severe skin burns and eye damage.              |
| H317 | : | May cause an allergic skin reaction.                  |
| H318 | : | Causes serious eye damage.                            |
| H330 | : | Fatal if inhaled.                                     |
| H400 | : | Very toxic to aquatic life.                           |
| H410 | : | Very toxic to aquatic life with long lasting effects. |

**Full text of other abbreviations**

|                 |   |                                    |
|-----------------|---|------------------------------------|
| Acute Tox.      | : | Acute toxicity                     |
| Aquatic Acute   | : | Short-term (acute) aquatic hazard  |
| Aquatic Chronic | : | Long-term (chronic) aquatic hazard |

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

Version            Revision Date:            SDS Number:            Date of last issue: -  
2.0                    21.02.2022                50000117                Date of first issue: 19.02.2019

---

Eye Dam.                    :    Serious eye damage  
Skin Corr.                    :    Skin corrosion  
Skin Sens.                    :    Skin sensitization

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Other information                    :

### Classification of the mixture:

Acute Tox. 4                    H332  
Aquatic Acute 1                H400  
Aquatic Chronic 1              H410

### Classification procedure:

Based on product data or assessment  
Based on product data or assessment  
Calculation method

### Disclaimer

FMC Corporation believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. You can contact FMC Corporation to insure that this document is the most current available from FMC Corporation. No warranty of fitness for any particular purpose, warranty of merchantability or any other warranty, expressed or implied, is made concerning the information provided herein. The information provided herein relates only to the specified product designated and may not be applicable where such product is used in combination with any other materials or in any process. The user is responsible for determining whether the product is fit for a particular purpose and suitable for the user's conditions

# SAFETY DATA SHEET



## CIRCADEN® 200 SC

|         |                |             |                                 |
|---------|----------------|-------------|---------------------------------|
| Version | Revision Date: | SDS Number: | Date of last issue: -           |
| 2.0     | 21.02.2022     | 50000117    | Date of first issue: 19.02.2019 |

---

and methods of use. Since the conditions and methods of use are beyond the control of FMC Corporation, FMC Corporation expressly disclaims any and all liability as to any results obtained or arising from any use of the products or reliance on such information.

### **Prepared by**

FMC Corporation

FMC Logo - Trademark of FMC Corporation

© 2021 FMC Corporation. All Rights Reserved.

ZA / EN