

# SAFETY DATA SHEET

## Benevia® insecticide



Version 1.3 Revision Date: 18.07.2023 SDS Number: 50000912 Date of last issue: 14.02.2023  
Date of first issue: 03.01.2018

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### Section 1: Identification

Product name : Benevia® insecticide

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

Recommended use : Insecticide

Restrictions on use : Use as recommended by the label.

### Manufacturer or supplier's details

Company : FMC New Zealand Ltd

Address : IRD number: 101-200-019  
6 Clayton Street, Newmarket  
1023 Auckland  
New Zealand

Telephone : +640800658080

Telefax : (09)-271-2961

E-mail address : SDS-Info@fmc.com

Emergency telephone number : For leak, fire, spill or accident emergencies, call:  
0800 734 607 (Ixom)

Medical emergency:  
0800 764 766 (NZ Poisons Information Centre)  
0800 111174 (24 hour Medical Emergency)  
0800 387668 (Transport Emergency)

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### Section 2: Hazard identification

#### GHS Classification

Skin sensitisation : Skin Sens.1

Specific target organ toxicity - repeated exposure : STOT RE2 (Liver, Thyroid)

Hazardous to the aquatic environment - acute hazard : Aquatic Acute1

Hazardous to the aquatic environment - chronic hazard : Aquatic Chronic1

Ecotoxic to terrestrial invertebrates

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### GHS label elements

Hazard pictograms



Signal word

: Warning

Hazard statements

: H317 May cause an allergic skin reaction.  
H373 May cause damage to organs (Liver, Thyroid) through prolonged or repeated exposure.  
H410 Very toxic to aquatic life with long lasting effects.  
H442 Toxic to terrestrial invertebrates.

Precautionary statements

: **Prevention:**

P260 Do not breathe dust.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of water.  
P314 Get medical advice/ attention if you feel unwell.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.

**Disposal:**

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

### Other hazards which do not result in classification

None known.

### Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Cyantraniliprole	736994-63-1	10.26
Fatty acids, soya, Me esters	68919-53-9	>= 50 -< 70
calcium dodecylbenzenesulphonate	26264-06-2	>= 10 -< 20
2-ethylhexan-1-ol	104-76-7	>= 1 -< 10

### Section 4: First-aid measures

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- 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 : Remove to fresh air.  
If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If on skin, rinse well with water.
- 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 : DO NOT induce vomiting unless directed to do so by a physician or poison control center.  
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.
- Most important symptoms and effects, both acute and delayed : Exposure to skin may result in mild symptoms include itching, hives or rash, and skin redness. More severe symptoms include sneezing, itchy watery eyes, and difficulty breathing.  
May cause an allergic skin reaction.
- Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.
- Notes to physician : Treat symptomatically.

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### Section 5: Fire-fighting measures

- Suitable extinguishing media : Carbon dioxide (CO<sub>2</sub>)  
Dry chemical  
Regular foam  
Water spray
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Fire may produce irritating, corrosive and/or toxic gases.  
Carbon oxides  
Sulphur oxides  
Chlorine compounds  
Nitrogen oxides (NO<sub>x</sub>)  
Bromine compounds  
Chlorinated compounds  
Hydrogen chloride

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### Hydrogen cyanide

Specific extinguishing methods	: Remove undamaged containers from fire area if it is safe to do so. Use a water spray to cool fully closed containers. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. 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.
Special protective equipment for firefighters	: Firefighters should wear protective clothing and self-contained breathing apparatus.
Hazchem Code	: 3Z

### Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. If it can be safely done, stop the leak. Keep people away from and upwind of spill/leak. Do not touch or walk through the spilled material. Remove all sources of ignition. Immediately evacuate personnel to safe areas. Ensure adequate ventilation.
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.
Methods and materials for containment and cleaning up	: Never return spills in original containers for re-use. Collect as much of the spill as possible with a suitable absorbent material. Pick up and transfer to properly labelled containers. Keep in suitable, closed containers for disposal.

### Section 7: Handling and storage

Advice on protection against fire and explosion	: Normal measures for preventive fire protection.
Advice on safe handling	: Do not breathe vapours/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area. Dispose of rinse water in accordance with local and national regulations. Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being

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used.

- Hygiene measures : Avoid contact with skin, eyes and clothing.  
Do not inhale aerosol.  
When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.
- Conditions for safe storage : 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 conditions : The product is stable under normal conditions of warehouse storage.  
Protect from frost and extreme heat.  
Store in closed, labelled containers. The storage room should be constructed of incombustible material, closed, dry, ventilated and with impermeable floor, without access of unauthorised persons or children. The room should only be used for storage of chemicals. Food, drink, feed and seed should not be present. A hand wash station should be available.
- Recommended storage temperature : > 0 - 35 °C
- Further information on storage stability : No decomposition if stored and applied as directed.

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### Section 8: Exposure controls/personal protection

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-ethylhexan-1-ol	104-76-7	TWA	5 ppm	ACGIH

#### Personal protective equipment

- Respiratory protection : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.
- Hand protection Material : Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
- Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles
- Skin and body protection : Impervious clothing

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Choose body protection according to the amount and concentration of the dangerous substance at the work place.

- Protective measures : Plan first aid action before beginning work with this product. Always have on hand a first-aid kit, together with proper instructions.  
Wear suitable protective equipment.  
When using do not eat, drink or smoke.

In the context of professional plant protection use as recommended, the end user must refer to the label and the instructions for use.

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### Section 9: Physical and chemical properties

Physical state	: liquid
Form	: dispersion
Colour	: off-white
Odour	: mild, oily
Odour Threshold	: No data available
pH	: 5.1 Concentration: 10 g/l 1 % (as a dispersion)
Melting point/freezing point	: not determined
Boiling point/boiling range	: 99 °C
Flash point	: > 99 °C Method: closed cup
Evaporation rate	: No data available
Flammability (liquids)	: Not highly flammable
Self-ignition	: 254 °C
Upper explosion limit / Upper flammability limit	: not determined
Lower explosion limit / Lower flammability limit	: not determined

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Relative vapour density	:	Not available for this mixture.
Relative density	:	0.978
Density	:	No data available
Bulk density	:	0.9 - 1.1 g/cm <sup>3</sup>
Solubility(ies)		
Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	not determined
Viscosity		
Viscosity, dynamic	:	345 mPa.s 25 rpm
		257 mPa.s 50 rpm
		200 mPa.s 100 rpm
Viscosity, kinematic	:	353 mm <sup>2</sup> /s 25 rpm
		204 mm <sup>2</sup> /s 100 rpm
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Molecular weight	:	Not applicable
Particle size	:	Not applicable

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### Section 10: Stability and reactivity

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Avoid formation of aerosol.

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Avoid extreme temperatures  
Heat, flames and sparks.  
Protect from frost, heat and sunlight.

- Incompatible materials : Avoid strong acids, bases, and oxidizers  
Hazardous decomposition products : Stable under recommended storage conditions.

### Section 11: Toxicological information

#### Acute toxicity

Not classified based on available information.

#### Product:

- Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 425  
GLP: yes  
Assessment: The substance or mixture has no acute oral toxicity
- Acute inhalation toxicity : LC50 (Rat): > 3.3 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity
- Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Assessment: The substance or mixture has no acute dermal toxicity

#### Components:

##### Cyantraniliprole:

- 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 (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  
Assessment: The substance or mixture has no acute dermal toxicity

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### Fatty acids, soya, Me esters:

Acute oral toxicity : LD50 (Rat): 5,000 - 15,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 2,000 - 20,000 mg/kg

### calcium dodecylbenzenesulphonate:

Acute oral toxicity : LD50 (Rat, male and female): 1,300 mg/kg  
Remarks: Based on data from similar materials

Acute inhalation toxicity : Remarks: Not classified

Acute dermal toxicity : LD50 (Rat, male and female): > 2000 milligram per kilogram  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: Based on data from similar materials

### 2-ethylhexan-1-ol:

Acute oral toxicity : LD50 (Rat, male): 2,047 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4.3 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male and female): > 3,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### Skin corrosion/irritation

Not classified based on available information.

#### Product:

Species : Rabbit  
Assessment : Not classified as irritant  
Method : OECD Test Guideline 404  
Result : slight or no skin irritation.  
GLP : yes

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

Remarks : May cause skin irritation and/or dermatitis.

#### Components:

##### Cyantraniliprole:

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

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Result : No skin irritation

### Fatty acids, soya, Me esters:

Result : slight irritation

### calcium dodecylbenzenesulphonate:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation

### 2-ethylhexan-1-ol:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Skin irritation

### Serious eye damage/eye irritation

Not classified based on available information.

### Product:

Species : Rabbit  
Result : Slight or no eye irritation  
Assessment : Not classified as irritant  
Method : OECD Test Guideline 405  
GLP : yes

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

### Components:

#### Cyantraniliprole:

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

### Fatty acids, soya, Me esters:

Result : Irritation to eyes, reversing within 7 days

### calcium dodecylbenzenesulphonate:

Species : Rabbit  
Result : Irreversible effects on the eye  
Method : OECD Test Guideline 405  
Remarks : Based on data from similar materials

Species : Rabbit  
Result : Irreversible effects on the eye  
Method : OECD Test Guideline 405

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### 2-ethylhexan-1-ol:

Species : Rabbit  
Result : Irritation to eyes, reversing within 21 days  
Method : OECD Test Guideline 405

### Respiratory or skin sensitisation

#### Skin sensitisation

May cause an allergic skin reaction.

#### Respiratory sensitisation

Not classified based on available information.

#### Product:

Test Type : Local lymph node test  
Species : mice  
Assessment : May cause sensitisation by skin contact.  
Method : OECD Test Guideline 429  
Result : Causes sensitisation.  
GLP : yes  
  
Remarks : Causes sensitisation.

#### Components:

##### Cyantraniliprole:

Test Type : Local lymph node test  
Method : OECD Test Guideline 429  
Result : Does not cause skin sensitisation.

##### Fatty acids, soya, Me esters:

Result : Does not cause skin sensitisation.

##### calcium dodecylbenzenesulphonate:

Test Type : Maximisation Test  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Not a skin sensitizer.  
Remarks : Based on data from similar materials

### Chronic toxicity

#### Germ cell mutagenicity

Not classified based on available information.

#### Product:

Genotoxicity in vitro : Test Type: Ames test  
Method: OECD Test Guideline 471  
Result: negative  
  
Genotoxicity in vivo : Test Type: Bone marrow chromosome aberration  
Species: Mouse

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Method: OECD Test Guideline 474  
Result: negative

Germ cell mutagenicity - Assessment : Contains no ingredient listed as a mutagen

### **Components:**

#### **Cyantraniliprole:**

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

#### **calcium dodecylbenzenesulphonate:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Method: OECD Test Guideline 471  
Result: negative  
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: chromosome aberration assay  
Species: Rat (male and female)  
Application Route: Oral  
Exposure time: 90 d  
Result: negative  
Remarks: Based on data from similar materials

Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

#### **2-ethylhexan-1-ol:**

Genotoxicity in vitro : Test Type: reverse mutation assay  
Method: OECD Test Guideline 471  
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse  
Application Route: Intraperitoneal injection  
Result: negative

### **Carcinogenicity**

Not classified based on available information.

### **Product:**

Carcinogenicity - Assessment : Contains no ingredient listed as a carcinogen

### **Components:**

#### **Cyantraniliprole:**

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

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### Fatty acids, soya, Me esters:

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

### calcium dodecylbenzenesulphonate:

Species : Rat, male and female  
Application Route : Oral  
Exposure time : 720 d  
NOAEL : 250 mg/kg body weight  
Result : negative  
Remarks : Based on data from similar materials

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

### 2-ethylhexan-1-ol:

Species : Rat  
Application Route : Oral  
Exposure time : 24 month(s)  
Result : negative

### Reproductive toxicity

Not classified based on available information.

### Product:

Reproductive toxicity - Assessment : Contains no ingredient listed as toxic to reproduction

### Components:

#### Cyantraniliprole:

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

### calcium dodecylbenzenesulphonate:

Effects on fertility : Test Type: Fertility/early embryonic development  
Species: Rat, male and female  
Application Route: Ingestion  
General Toxicity - Parent: NOAEL: 400 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: negative

Effects on foetal development : Test Type: reproductive and developmental toxicity study  
Species: Rat  
Application Route: Ingestion  
General Toxicity Maternal: NOAEL: 300 mg/kg body weight  
Developmental Toxicity: NOAEL: 600 mg/kg body weight  
Method: OECD Test Guideline 422  
Result: negative

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

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### 2-ethylhexan-1-ol:

Effects on foetal development : Test Type: Embryo-foetal development  
Species: Mouse  
Application Route: Oral  
Method: OECD Test Guideline 414  
Result: negative

### STOT - single exposure

Not classified based on available information.

### Product:

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

### Components:

#### Cyantraniliprole:

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

### 2-ethylhexan-1-ol:

Assessment : May cause respiratory irritation.

### STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

### Components:

#### Cyantraniliprole:

Target Organs : Liver, Thyroid  
Assessment : May cause damage to organs through prolonged or 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  
Symptoms : increased liver weight  
Remarks : Based on available data, the classification criteria are not met.

#### calcium dodecylbenzenesulphonate:

Species : Rat, male and female  
NOAEL : 85 mg/kg

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LOAEL	:	145 mg/kg
Application Route	:	Oral
Exposure time	:	9 Months
Remarks	:	Based on data from similar materials
Species	:	Rat, male and female
NOAEL	:	1 mg/kg, 1 mg/l, 1 mg/kg bw/day
LOAEL	:	100 mg/kg, 10 mg/l, 10 ppm
Application Route	:	200 mg/kg, 10 mg/l, 10 mg/kg bw/day
Exposure time	:	Oral
Number of exposures	:	10 unit manually typed 14 h
Subsequent observation period	:	5 unit manually typed
Method	:	10 unit manually typed
Remarks	:	OECD Test Guideline 422
Species	:	Based on data from similar materials
LOAEL	:	Rat, male
Application Route	:	286 mg/kg
Exposure time	:	Skin contact
Remarks	:	15 Days
Species	:	Based on data from similar materials

### **2-ethylhexan-1-ol:**

Species	:	Rat
Application Route	:	250 mg/kg
Exposure time	:	Oral
Method	:	13 weeks
	:	OECD Test Guideline 408

### **Aspiration toxicity**

Not classified based on available information.

### **Product:**

No aspiration toxicity classification

### **Components:**

#### **Cyantraniliprole:**

The substance does not have properties associated with aspiration hazard potential.

### **Further information**

#### **Product:**

Remarks : No data available

### **Components:**

#### **Cyantraniliprole:**

Remarks : No data available

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### Section 12: Ecological information

#### Ecotoxicity

##### Product:

Toxicity to fish

: LC50 (Lepomis macrochirus (Bluegill sunfish)): 37 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates

: EC50 (Daphnia magna (Water flea)): 0.215 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
GLP: yes

EC50 (Daphnia magna (Water flea)): 0.00947 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
GLP: yes

EC50 (Daphnia magna (Water flea)): 20.4 µg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae/aquatic plants

: ErC50 (Pseudokirchneriella subcapitata (green algae)): 63.8 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes

Toxicity to soil dwelling organisms

: LC50 (worms): > 1,000 mg/kg

Toxicity to terrestrial organisms

: LD50 (Apis mellifera (bees)): 5 µg/bee

LD50 (Apis mellifera (bees)): 3.79 µg/bee  
Exposure time: 72 h  
End point: Acute oral toxicity

LD50 (Apis mellifera (bees)): 6.31 µg/bee  
Exposure time: 96 h  
End point: Acute contact toxicity

#### Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

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### Components:

#### Cyantraniliprole:

- Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): > 12.6 mg/l  
Exposure time: 96 h
- LC50 (*Ictalurus punctatus* (channel catfish)): > 10 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
- EbC50 (*Pseudokirchneriella subcapitata* (algae)): > 13 mg/l  
Exposure time: 72 h
- ErC50 (*Lemna gibba* (duckweed)): 0.278 mg/l  
Exposure time: 7 d
- EyC50 (*Lemna gibba* (duckweed)): 0.060 mg/l  
Exposure time: 7 d
- M-Factor (Acute aquatic toxicity) : 10
- Toxicity to fish (Chronic toxicity) : NOEC (*Cyprinodon variegatus* (sheepshead minnow)): 2.9 mg/l  
Exposure time: 28 d
- NOEC (*Oncorhynchus mykiss* (rainbow trout)): 0.11 mg/l  
Exposure time: 21 d
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): 0.00656 mg/l  
Exposure time: 21 d
- NOEC (*Daphnia magna* (Water flea)): 0.00969 mg/l  
Exposure time: 21 d
- NOEC (*Daphnia magna* (Water flea)): 0.00447 mg/l  
Exposure time: 21 d
- M-Factor (Chronic aquatic toxicity) : 10
- Toxicity to soil dwelling organisms : LC50 (*Eisenia fetida* (earthworms)): > 1,000 mg/kg  
Exposure time: 14 d
- Toxicity to terrestrial organisms : LD50 (*Apis mellifera* (bees)): > 0.0934 µg/bee  
Exposure time: 48 h  
End point: Acute contact toxicity

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

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

### Fatty acids, soya, Me esters:

- Toxicity to fish : LC50 (Fish): > 1,000 mg/l  
Exposure time: 96 h
- LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l  
Exposure time: 48 h  
Method: ISO 7346/2
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Crustaceans): 800 - 5,243 mg/l  
Exposure time: 48 h
- calcium dodecylbenzenesulphonate:**
- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 10 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203  
Remarks: Based on data from similar materials
- LC50 (Pimephales promelas (fathead minnow)): 4.6 mg/l  
Exposure time: 96 h  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.5 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
Remarks: Based on data from similar materials
- Toxicity to algae/aquatic plants : NOEC (Pseudokirchneriella subcapitata (green algae)): 7.9 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials
- EC50 (Pseudokirchneriella subcapitata (green algae)): 65.4 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.65 mg/l  
Exposure time: 21 d  
Remarks: Based on data from similar materials
- NOEC (Daphnia magna (Water flea)): 1.18 mg/l  
Exposure time: 21 d  
Remarks: Based on data from similar materials
- Toxicity to microorganisms : EC50 (activated sludge): 500 mg/l  
Exposure time: 3 h

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Method: OECD Test Guideline 209

- Toxicity to soil dwelling organisms : LC50 (*Eisenia fetida* (earthworms)): 1,000 mg/kg  
Exposure time: 14 d  
Method: OECD Test Guideline 207
- Toxicity to terrestrial organisms : LD50 (*Colinus virginianus* (Bobwhite quail)): 1,356 mg/kg  
Exposure time: 14 d  
Method: OECD Test Guideline 223

### **2-ethylhexan-1-ol:**

- Toxicity to fish : LC50 (*Leuciscus idus* (Golden orfe)): 17.1 - 28.2 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 39 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : EC10 (*Desmodesmus subspicatus* (green algae)): 3.2 mg/l  
Exposure time: 72 h  
  
EC50 (*Desmodesmus subspicatus* (green algae)): 11.5 mg/l  
Exposure time: 72 h
- Toxicity to microorganisms : EC50 (*Anabaena flos-aquae* (cyanobacterium)): 16.6 mg/l  
Exposure time: 72 h

### **Persistence and degradability**

#### **Product:**

- Biodegradability : Remarks: Product contains minor amounts of not readily biodegradable components, which may not be degradable in waste water treatment plants.

#### **Components:**

##### **Cyantraniliprole:**

- Biodegradability : Remarks: Not readily biodegradable.

##### **Fatty acids, soya, Me esters:**

- Biodegradability : Result: Readily biodegradable.

##### **calcium dodecylbenzenesulphonate:**

- Biodegradability : Result: Readily biodegradable.  
Method: OECD Test Guideline 301E

### **2-ethylhexan-1-ol:**

- Biodegradability : Result: Readily biodegradable.

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### Bioaccumulative potential

#### Product:

Bioaccumulation

: Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Remarks: No data available

#### Components:

##### **Cyantraniliprole:**

Bioaccumulation

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

Bioconcentration factor (BCF): 15

Partition coefficient: n-octanol/water

: log Pow: 1.97 (22 °C)  
pH: 4

log Pow: 2.07 (22 °C)  
pH: 7

log Pow: 1.74 (22 °C)  
pH: 9

##### **Fatty acids, soya, Me esters:**

Bioaccumulation

: Remarks: Bioaccumulation is unlikely.

##### **calcium dodecylbenzenesulphonate:**

Bioaccumulation

: Species: Fish  
Bioconcentration factor (BCF): 70.79  
Method: QSAR

Partition coefficient: n-octanol/water

: log Pow: 4.77 (25 °C)

##### **2-ethylhexan-1-ol:**

Partition coefficient: n-octanol/water

: log Pow: 2.9 (25 °C)

### Mobility in soil

#### Product:

Distribution among environmental compartments

: Remarks: No data is available on the product itself.

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### Components:

#### **Cyantraniliprole:**

Distribution among environmental compartments : Koc: 241 ml/g, log Koc: 2.38  
Remarks: Mobile in soils

### **Other adverse effects**

#### **Product:**

Additional ecological information : See product label for additional application instructions relating to environmental precautions.  
  
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

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## Section 13: Disposal considerations

### **Disposal methods**

Waste from residues : 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.  
Do not re-use empty containers.  
Packaging that is not properly emptied must be disposed of as the unused product.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## Section 14: Transport information

### **International Regulations**

#### **UNRTDG**

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Cyantraniliprole)

Class : 9  
Packing group : III  
Labels : 9

#### **IATA-DGR**

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(Cyantraniliprole)

Class : 9  
Packing group : III  
Labels : Miscellaneous

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Packing instruction (cargo aircraft) : 964

Packing instruction (passenger aircraft) : 964

Environmentally hazardous : yes

### IMDG-Code

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Cyantraniliprole)

Class : 9

Packing group : III

Labels : 9

EmS Code : F-A, S-F

Marine pollutant : yes

Remarks : Environmentally hazardous substances/Marine Pollutants in single or combination packaging containing a net quantity per single or inner packaging of 5 kg or less for solids, or having a net quantity per single or inner packaging of 5 L or less for liquids may be transported as non-dangerous goods as provided in special provision A197 of the IATA and section 2.10.2.7 of IMDG code.

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### NZS 5433

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(Cyantraniliprole)

Class : 9

Packing group : III

Labels : 9

Hazchem Code : 3Z

### 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.

### Section 15: Regulatory information

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

#### HSNO Approval Number

HSR100856

ACVM Number : P008571

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### The components 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.  3-BROMO-1-(3-CHLORO-2-PYRIDYL)-4'-CYAN-2'-METHYL-6'-(METHYLCARBAMOYL)-1H-PYRAZOLE-5-CARBOXANILIDE Fatty acids, C6-10, Me esters
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

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### Section 16: Other information

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### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

ACGIH / TWA : 8-hour, time-weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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

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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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

### Disclaimer

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