

SAFETY DATA SHEET



Benevia® 100 g/l OD

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	23.01.2024	50000912	Date of first issue: 01.03.2018

SECTION 1: Identification of the hazardous chemical and of the supplier

Product identifier

Product name : Benevia® 100 g/l OD

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

Principal Supplier : FMC Corporation
2929 WALNUT ST
PHILADELPHIA PA 19104
USA
(215) 299-6000
SDS-Info@fmc.com

Local registrant : FMC Chemicals (Malaysia) Sdn Bhd
Level 16, 1 Sentral, Jalan Stesen Sentral 5, Kuala Lumpur Sentral
50470, Kuala Lumpur, Malaysia
Phone No: +60320929423
Fax No: +603-2092 9201

Emergency telephone : For leak, fire, spill or accident emergencies, call:
CHEMTREC (Asia-Pacific Regional Number): +65 3163 8374

Medical emergency:
All other countries: +1 651 / 632-6793 (Collect)
1 703 / 741-5970 (CHEMTREC - International)

SECTION 2: Hazards identification

Classification of the hazardous chemical

Skin sensitization : Category 1

Hazardous to the aquatic environment - acute hazard : Category 1

Hazardous to the aquatic environment - chronic hazard : Category 1

Label elements

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Hazard pictograms :

Signal Word : Warning

Hazard Statements : H317 May cause an allergic skin reaction.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**
P261 Avoid breathing mist or vapors.
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 and soap.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P363 Wash contaminated clothing 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 and information of the ingredients of the hazardous chemical

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Cyantraniliprole	736994-63-1	10.26
calcium dodecylbenzenesulphonate	26264-06-2	>= 10 -< 30
Fatty acids, soya, Me esters	68919-53-9	>= 30 -< 60
2-ethylhexan-1-ol	104-76-7	>= 5 -< 10
Fatty acids, C6-10, Me esters	68937-83-7	>= 1 -< 3

SECTION 4: 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 : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.

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If experiencing any discomfort, immediately remove from exposure. Light cases: Keep person under surveillance. Get medical attention immediately if symptoms develop. Serious cases: Get medical attention immediately or call for an ambulance.

- | | | |
|---|---|--|
| 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 | : | First Aid responders should pay attention to self-protection and use the recommended protective clothing
Avoid inhalation, ingestion and contact with skin and eyes.
If potential for exposure exists refer to Section 8 for specific personal protective equipment. |
| Notes to physician | : | Treat symptomatically. |

SECTION 5: Firefighting measures

Extinguishing media

- | | | |
|------------------------------|---|--|
| Suitable extinguishing media | : | Carbon dioxide (CO ₂)
Dry chemical
Regular foam
Water spray |
|------------------------------|---|--|

- | | | |
|--------------------------------|---|-----------------------|
| Unsuitable extinguishing media | : | High volume water jet |
|--------------------------------|---|-----------------------|

Physicochemical hazards arising from the chemical

- | | | |
|---------------------------------------|---|--|
| 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
Sulfur oxides
Chlorine compounds |

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Nitrogen oxides (NO_x)
Bromine compounds
Hydrogen cyanide

Special protective equipment and precautions for fire-fighters

Special protective equipment : Firefighters should wear protective clothing and self-contained breathing apparatus.

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.

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.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.

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 labeled containers.
Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

Handling

Precautions for safe handling

Advice on protection against : Normal measures for preventive fire protection.

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fire and explosion

Advice on safe handling : Do not breathe vapors/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 sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

Storage

Conditions for safe storage, including any incompatibilities

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 : 5 - 30 °C

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8: Exposure controls and personal protection

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

Individual protection measures, such as personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

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| Skin protection | : Impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place. |
| 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. |
| Respiratory protection | : In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit. |
| 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.
Remove and wash contaminated clothing and gloves, including the inside, before re-use. |

SECTION 9: Physical and chemical properties

- | | |
|------------------------------|---|
| Physical state | : liquid |
| Form | : dispersion |
| Color | : off-white |
| Odor | : mild, oily |
| Odor 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 |

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Self-ignition	:	254 °C
Upper explosion limit / Upper flammability limit	:	not determined
Lower explosion limit / Lower flammability limit	:	not determined
Relative vapor density	:	Not available for this mixture.
Relative density	:	0.978
Density	:	No data available
Bulk density	:	0.9 - 1.1 g/cm ³
Solubility(ies)	:	
Water solubility	:	dispersible
Partition coefficient: n-octanol/water	:	No data available
Autoignition 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 ² /s 25 rpm
		204 mm ² /s 100 rpm
Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Molecular weight	:	Not applicable
Particle size	:	Not applicable

SECTION 10: Stability and reactivity

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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. Avoid extreme temperatures. Heat, flames and sparks. Protect from frost, heat and sunlight. Heating of the product will produce harmful and irritant vapours.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	Stable under recommended storage conditions.

SECTION 11: Toxicological information

Information on likely routes of exposure : Skin contact

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
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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

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

Fatty acids, soya, Me esters:

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

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

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

Fatty acids, C6-10, Me esters:

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

Skin corrosion/irritation

Not classified based on available information.

Product:

Species : Rabbit

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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
Result	:	No skin irritation

calcium dodecylbenzenesulphonate:

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

Fatty acids, soya, Me esters:

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

2-ethylhexan-1-ol:

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

Fatty acids, C6-10, Me esters:

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

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Method : OECD Test Guideline 405

Components:

Cyantraniliprole:

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

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

Fatty acids, soya, Me esters:

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

2-ethylhexan-1-ol:

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

Fatty acids, C6-10, Me esters:

Species : Rabbit
Result : slight irritation
Method : OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

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

Remarks : Causes sensitization.

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Components:

Cyantraniliprole:

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

calcium dodecylbenzenesulphonate:

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

Fatty acids, soya, Me esters:

Result	:	Does not cause skin sensitization.
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Fatty acids, C6-10, Me esters:

Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	Not a skin sensitizer.

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 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.
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calcium dodecylbenzenesulphonate:

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

Fatty acids, C6-10, Me esters:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

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

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

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Fatty acids, soya, Me esters:

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 fetal 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 reproductive toxicity

2-ethylhexan-1-ol:

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

STOT-single exposure

Not classified based on available information.

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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

Not classified based on available information.

Product:

Assessment : The substance or mixture is not classified as specific target organ toxicant, 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
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
LOAEL : 145 mg/kg
Application Route : Oral
Exposure time : 9 Months
Remarks : Based on data from similar materials

Species : Rat, male
LOAEL : 286 mg/kg
Application Route : Skin contact
Exposure time : 15 Days

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Remarks : Based on data from similar materials

Species : Rat, male and female
NOAEL : 100 mg/kg bw/day
LOAEL : 200 mg/kg bw/day
Application Route : Oral - gavage
Exposure time : 28 - 54 days
Method : OECD Test Guideline 422
Remarks : Based on data from similar materials

2-ethylhexan-1-ol:

Species : Rat
: 250 mg/kg
Application Route : Oral
Exposure time : 13 weeks
Method : 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

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

EC50 (Daphnia magna (Water flea)): 0.00947 mg/l

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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)): 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.

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

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 tox- : 10

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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

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

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

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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
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

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

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

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Fatty acids, C6-10, Me esters:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 95 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Gammarus fasciatus (freshwater shrimp)): 14.7 mg/l
Remarks: Based on data from similar materials

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.

calcium dodecylbenzenesulphonate:

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

Fatty acids, soya, Me esters:

Biodegradability : Result: Readily biodegradable.

2-ethylhexan-1-ol:

Biodegradability : Result: Readily biodegradable.

Fatty acids, C6-10, Me esters:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Product:

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

Components:

Cyantraniliprole:

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

Bioconcentration factor (BCF): 15

Partition coefficient: n- : log Pow: 1.97 (22 °C)

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octanol/water	pH: 4
	log Pow: 2.07 (22 °C)
	pH: 7
	log Pow: 1.74 (22 °C)
	pH: 9

calcium dodecylbenzenesulphonate:

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

Partition coefficient: n-octanol/water	:	log Pow: 4.77 (25 °C)
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Fatty acids, soya, Me esters:

Bioaccumulation	:	Remarks: Bioaccumulation is unlikely.
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2-ethylhexan-1-ol:

Partition coefficient: n-octanol/water	:	log Pow: 2.9 (25 °C)
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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.
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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 information

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water
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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.

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
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

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

Not applicable for product as supplied.

Hazchem Code : •3Z

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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 specific for the hazardous chemical

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

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. 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

SECTION 16: Other information

Revision Date	: 23.01.2024
Date format	: dd.mm.yyyy

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
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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 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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