

SAFETY DATA SHEET

according to the Globally Harmonized System



BENEVIA® 10 OD

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	26.08.2024	50000912	Date of first issue: 26.08.2024

1. IDENTIFICATION

Product name : BENEVIA® 10 OD

Manufacturer or supplier's details

Company : FMC CORPORATION

Address : 2929 WALNUT STREET
PHILADELPHIA, PA 19104 USA
(215) 299-6000 (INFORMACIÓN GENERAL)

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

Emergency telephone : +506-40003869
911

Medical Emergency Number : Costa Rica - National Center of Poisoning - (506) 2223-1028;
800-INTOXICA
Dominican Republic: DOMINICAN REPUBLIC - Center for
Drug Information and Poisoning - (809) 562-6601 Ext. 1801
El Salvador - Rosales National Hospital - (503) 2231-9262
Guatemala - Center of Toxicological Information and Assis-
tance - (502) 2251-3560 / 2232-0735
Honduras - Hospital School - (504) 232-6105
Nicaragua - National Center of Toxicology - (505) 2289-4700
ext. 1294 cel. 8755-0983
Panama Center of Research and Information on Medications
and Toxicology (507) 523-4948

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide

Restrictions on use : Use as recommended by the label.

2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS 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.
P333 + P317 If skin irritation or rash occurs: Get medical help.
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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Fatty acids, soya, Me esters	68919-53-9	>= 50 - < 70
calcium dodecylbenzenesulphonate	26264-06-2	>= 10 - < 20
Cyantraniliprole	736994-63-1	>= 10 - < 20
2-ethylhexan-1-ol	104-76-7	>= 2.5 - < 10
Polyoxyethylene sorbitol hexaoleate	57171-56-9	>= 2.5 - < 10
Fatty acids, C6-10, Me esters	68937-83-7	>= 1 - < 10
Silica, amorphous, fumed, cryst.-free	112945-52-5	>= 1 - < 10

4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in attendance.

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- Do not leave the victim unattended.
- If inhaled : Remove to fresh air.
If unconscious, place in recovery position and seek medical advice.
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 clothes, remove clothes.
If on skin, rinse well with water.
Wash off with soap and plenty of water.
Get medical attention immediately if irritation develops and persists.
- 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.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Dry chemical, CO2, water spray or regular foam.
- Unsuitable extinguishing media : Do not spread spilled material with high-pressure water streams.
- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

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- | | |
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| Hazardous combustion products | : Fire may produce irritating, corrosive and/or toxic gases.
Carbon oxides
Sulfur oxides
Chlorine compounds
Nitrogen oxides (NOx)
Bromine compounds
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 fire-fighters | : Firefighters should wear protective clothing and self-contained breathing apparatus. |

6. ACCIDENTAL RELEASE MEASURES

- | | |
|---|---|
| Personal precautions, protective equipment and emergency procedures | : Evacuate personnel to safe areas.
Use personal protective equipment.
If it can be safely done, stop the leak.
Do not touch or walk through the spilled material.
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. |

7. HANDLING AND STORAGE

- | | |
|---|---|
| Advice on protection against fire and explosion | : Normal measures for preventive fire protection. |
| Advice on safe handling | : Do not breathe vapors/dust. |

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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.

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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-ethylhexan-1-ol	104-76-7	TLV-TWA	5 mg/m ³	DO OEL
		TWA	5 ppm	ACGIH
Silica, amorphous, fumed, cryst.-free	112945-52-5	TLV-TWA	10 mg/m ³	DO OEL

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Hand protection

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- | | |
|--------------------------|--|
| 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
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. |
| 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. |

9. PHYSICAL AND CHEMICAL PROPERTIES

- | | |
|------------------------------|---|
| Appearance | : dispersion |
| 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 |

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Boiling point/boiling range	:	99 °C
Flash point	:	> 99 °C
		Method: closed cup
Evaporation rate	:	No data available
Flammability (liquids)	:	Not highly flammable, may be ignitable, Based on available information, the classification criteria for flammability hazard are not met.
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/cm3
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 mm2/s
		25 rpm

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204 mm²/s
100 rpm

Explosive properties	:	Not explosive
Oxidizing properties	:	Non-oxidizing
Molecular weight	:	Not applicable
Particle size	:	Not applicable

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. 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.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation Skin contact
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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): > 5.2 mg/l

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Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: yes
Assessment: The component/mixture is minimally toxic after short term inhalation.

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:

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

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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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

Polyoxyethylene sorbitol hexaoleate:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg
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Fatty acids, C6-10, Me esters:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg
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Silica, amorphous, fumed, cryst.-free:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Based on data from similar materials
Acute inhalation toxicity	: LC50 (Rat): > 5.01 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	: LD50 (Rabbit): > 5,000 mg/kg

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
Remarks	: May cause skin irritation and/or dermatitis.

Components:

Fatty acids, soya, Me esters:

Result	: slight irritation
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calcium dodecylbenzenesulphonate:

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

Cyantraniliprole:

Species	:	Rabbit
Assessment	:	No skin irritation

Method	:	OECD Test Guideline 404
Result	:	No skin irritation

2-ethylhexan-1-ol:

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

Polyoxyethylene sorbitol hexaoleate:

Species	:	Rabbit
Result	:	No skin irritation

Fatty acids, C6-10, Me esters:

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

Silica, amorphous, fumed, cryst.-free:

Species	:	Rabbit
Result	:	No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Product:

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

Components:

Fatty acids, soya, Me esters:

Result	:	Irritation to eyes, reversing within 7 days
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calcium dodecylbenzenesulphonate:

Species	:	Rabbit
Method	:	OECD Test Guideline 405

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Result : Irreversible effects on the eye
Remarks : Based on data from similar materials

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

Cyantraniliprole:

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

2-ethylhexan-1-ol:

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

Polyoxyethylene sorbitol hexaoleate:

Species : Rabbit
Result : No eye irritation

Fatty acids, C6-10, Me esters:

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

Silica, amorphous, fumed, cryst.-free:

Species : Rabbit
Result : No eye irritation

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

Species : multiple species
Method : OECD Test Guideline 406
Result : May cause sensitization by skin contact.

Test Type : Local lymph node test
Species : mice
Assessment : May cause sensitization by skin contact.

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Method	:	OECD Test Guideline 429
Result	:	Causes sensitization.
GLP	:	yes

Remarks	:	Causes sensitization.
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Components:

Fatty acids, soya, Me esters:

Result	:	Does not cause skin sensitization.
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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

Cyantraniliprole:

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

Polyoxyethylene sorbitol hexaoleate:

Test Type	:	Human repeat insult patch test (HRIPT)
Species	:	Humans
Result	:	negative

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

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Components:

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.

Cyantraniliprole:

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

Fatty acids, soya, Me esters:

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

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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Cyantraniliprole:

Carcinogenicity - Assessment	: Weight of evidence does not support classification as a carcinogen
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2-ethylhexan-1-ol:

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

Silica, amorphous, fumed, cryst.-free:

Result	: negative
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Reproductive toxicity

Not classified based on available information.

Product:

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

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
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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
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Method: OECD Test Guideline 422

Result: negative

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

Cyantraniliprole:

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

Silica, amorphous, fumed, cryst.-free:

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

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.

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Repeated dose toxicity

Components:

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
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

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.

2-ethylhexan-1-ol:

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

Silica, amorphous, fumed, cryst.-free:

Remarks	: No adverse effect has been observed in chronic toxicity tests.
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Aspiration toxicity

Not classified based on available information.

Product:

No aspiration toxicity classification

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Components:

Cyantraniliprole:

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

Further information

Product:

Remarks : No data available

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: > 1,000 mg/kg
Species: worms

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

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

Ecotoxicology Assessment

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

Components:

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 : EC50 (Crustaceans): 800 - 5,243 mg/l
aquatic invertebrates 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 : EC50 (Daphnia magna (Water flea)): 3.5 mg/l
aquatic invertebrates Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials
Toxicity to algae/aquatic : NOEC (Pseudokirchneriella subcapitata (green algae)): 7.9
plants 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 microorganisms : EC50 (activated sludge): 500 mg/l

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Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1.65 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Remarks: Based on data from similar materials

NOEC: 1.18 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Remarks: Based on data from similar materials

Toxicity to soil dwelling organisms : LC50: 1,000 mg/kg
Exposure time: 14 d
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 207

Toxicity to terrestrial organisms : LD50: 1,356 mg/kg
Exposure time: 14 d
Species: Colinus virginianus (Bobwhite quail)
Method: OECD Test Guideline 223

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 toxicity) : 10

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

NOEC: 0.11 mg/l
Exposure time: 21 d

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Species: *Oncorhynchus mykiss* (rainbow trout)

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

NOEC: 0.00969 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)

NOEC: 0.00447 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)

M-Factor (Chronic aquatic toxicity) : 10

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)

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

Polyoxyethylene sorbitol hexaoleate:

Toxicity to algae/aquatic : EbC50 (*Skeletonema costatum* (Diatom)): 20 mg/l

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plants

Exposure time: 72 h

ErC50 (Skeletonema costatum (Diatom)): 98 mg/l
Exposure time: 72 h

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

Silica, amorphous, fumed, cryst.-free:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 10,000 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 1,000 mg/l
aquatic invertebrates
Exposure time: 24 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:

Fatty acids, soya, Me esters:

Biodegradability : Result: Readily biodegradable.

calcium dodecylbenzenesulphonate:

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

Cyantraniliprole:

Biodegradability : Remarks: Not readily biodegradable.

2-ethylhexan-1-ol:

Biodegradability : Result: Readily biodegradable.

Polyoxyethylene sorbitol hexaoleate:

Biodegradability : Result: Biodegradable
Biodegradation: 99 %

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Result: Biodegradable
Biodegradation: 65 %

Fatty acids, C6-10, Me esters:

Biodegradability : Result: Readily biodegradable.

Silica, amorphous, fumed, cryst.-free:

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Product:

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

Components:

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)

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

log Pow: 2.07 (22 °C)
pH: 7

log Pow: 1.74 (22 °C)
pH: 9

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.

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

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 : It is prohibited to reuse, bury, burn, or sell containers. Rinsable containers: Triple rinse containers of less than 20 liters and pressure rinse containers of 20 liters or more. Triple rinsing: Add water up to ¼ of the container's capacity, close and shake for 30 seconds. Pour the rinse water into the mixing tank, considering this volume of water within the recommended volume for mixing preparation. Perform this procedure three times. Pressure rinsing: Activate the pressure rinsing device for 30 seconds, considering the volume of water used as part of the recommended volume for mixing preparation. In both procedures, punctured the container on its base without damaging the label. In all cases, take the empty containers to collection points indicated by the local empty containers program.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

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

Class : 9
Packing group : III
Labels : 9
Environmentally hazardous : yes

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 IMO instruments

Not applicable for product as supplied.

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.

15. REGULATORY INFORMATION

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

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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

16. OTHER INFORMATION

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Further information

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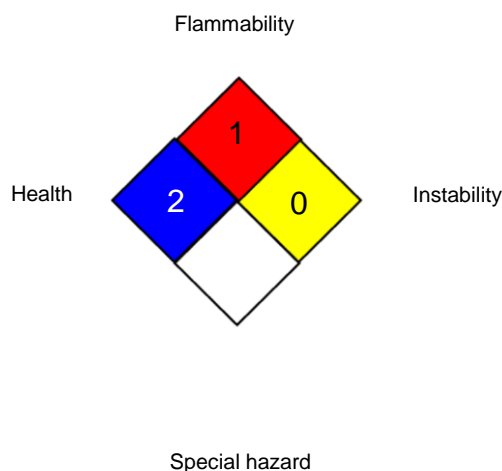
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NFPA:



HMIS® IV:

HEALTH	/	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
DO OEL : Dominican Republic. Health and Safety at Work Regulation -
Not exhaustive table of indicative limit values.

ACGIH / TWA : 8-hour, time-weighted average
DO OEL / TLV-TWA : TLV-TWA

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,

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tion, 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

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