

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product name : BENEVIA® (БЕНЕВИЯ®)

Manufacturer or supplier's details

Company : FMC Corporation

Address : 2929 WALNUT ST
PHILADELPHIA PA 19104
USA

Telephone : +12152996000

Emergency telephone number : +44 20 3885 0382 (CHEMTREC's European Regional Toll-Free Number)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

Medical Emergency Number : All other countries: +1 651 / 632-6793 (Collect)

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

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

Acute toxicity (Inhalation) : Category 5

Skin sensitisation : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS-Labeling

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
H333 May be harmful if inhaled.

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0 Revision Date: 27.07.2023 SDS Number: 50000912 Date of last issue: -
Date of first issue: 27.07.2023

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

:

Prevention:

P261 Avoid breathing mist or vapours.
P273 Avoid release to the environment.
P280 Wear protective gloves.

Response:

P304 + P312 IF INHALED: Call a POISON CENTER/ doctor if you feel unwell.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P391 Collect spillage.

Other hazards which do not result in classification

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance/mixture

: Mixture

Components

Chemical name	CAS-No.	Classification	MAC value mg/m ³ / TSEL value	Concentration (% w/w)
Fatty acids, soya, Me esters	68919-53-9	Acute Tox.5; H303 Acute Tox.4; H312 Eye Irrit.2B; H320	No data available	>= 50 - < 70
calcium dodecylbenzenesulphonate	26264-06-2	Acute Tox.4; H302 Skin Irrit.2; H315 Eye Dam.1; H318 Aquatic Acute2; H401	No data available	>= 10 - < 20
Cyantraniliprole	736994-63-1	Aquatic Acute1; H400 Aquatic Chronic1; H410	No data available	10,26
2-ethylhexan-1-ol	104-76-7	Flam. Liq.4; H227 Acute Tox.5; H303 Acute Tox.4; H332 Skin Irrit.2; H315 Eye Irrit.2A;	MPC-STEL: 10 mg/m ³ Class 3 - Moder- ately dangerous, Substances which require special skin and eye protection Data Source: RU	>= 2,5 - < 10

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0 Revision Date: 27.07.2023 SDS Number: 50000912 Date of last issue: -
Date of first issue: 27.07.2023

		H319 STOT SE3; H335 (Respiratory system) Aquatic Acute3; H402	OEL	
Polyoxyethylene sorbitol hexaoleate	57171-56-9	Aquatic Acute3; H402	No data available	$\geq 2,5 - < 10$
Fatty acids, C6-10, Me esters	68937-83-7	Flam. Liq.4; H227 Skin Irrit.2; H315	No data available	$\geq 1 - < 10$

For explanation of abbreviations see section 16.

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.
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.
May be harmful if inhaled.
- Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.
- Notes to physician : Treat symptomatically.

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0	Revision Date: 27.07.2023	SDS Number: 50000912	Date of last issue: - Date of first issue: 27.07.2023
----------------	------------------------------	-------------------------	--

5. FIREFIGHTING MEASURES

Flammable properties

- | | | |
|--|---|--|
| Flash point | : | > 99 °C
Method: closed cup |
| Ignition temperature | : | No data available |
| Upper explosion limit / Upper flammability limit | : | not determined |
| Lower explosion limit / Lower flammability limit | : | not determined |
| Flammability (liquids) | : | Not highly flammable |
| 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. |
| Hazardous combustion products | : | Fire may produce irritating, corrosive and/or toxic gases.
Carbon oxides
Sulphur oxides
Chlorine compounds
Nitrogen oxides (NOx)
Bromine compounds
Chlorinated compounds
Hydrogen chloride
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. |
| Further information | : | 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. |

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. |
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SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0	Revision Date: 27.07.2023	SDS Number: 50000912	Date of last issue: - Date of first issue: 27.07.2023
----------------	------------------------------	-------------------------	--

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.

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 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 : > 0 - 35 °C

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0 Revision Date: 27.07.2023 SDS Number: 50000912 Date of last issue: -
Date of first issue: 27.07.2023

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

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	MPC-STEEL (aerosol)	10 mg/m ³	RU OEL
Further information: Class 3 - Moderately dangerous, Substances which require special skin and eye protection				
		TWA	1 ppm 5,4 mg/m ³	2017/164/EU

Personal protective equipment

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

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
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.

9. PHYSICAL AND CHEMICAL PROPERTIES

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0	Revision Date: 27.07.2023	SDS Number: 50000912	Date of last issue: - Date of first issue: 27.07.2023
----------------	------------------------------	-------------------------	--

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
Relative vapour 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
Auto-ignition temperature	: No data available

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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

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.
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 : Skin contact

Acute toxicity

May be harmful if inhaled.

Product:

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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 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

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

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

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
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

calcium dodecylbenzenesulphonate:

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

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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

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

Components:

Fatty acids, soya, Me esters:

Result	:	Irritation to eyes, reversing within 7 days
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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

Cyantraniliprole:

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

2-ethylhexan-1-ol:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

Method : OECD Test Guideline 405

Polyoxyethylene sorbitol hexaoleate:

Species : Rabbit
Result : No eye irritation

Fatty acids, C6-10, Me esters:

Species : Rabbit
Result : slight irritation
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:

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

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:

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

Cyantraniliprole:

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

Polyoxyethylene sorbitol hexaoleate:

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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

Fatty acids, C6-10, Me esters:

Exposure routes	:	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:

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
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SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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:

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

Cyantraniliprole:

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:

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0	Revision Date: 27.07.2023	SDS Number: 50000912	Date of last issue: - Date of first issue: 27.07.2023
----------------	------------------------------	-------------------------	--

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

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

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 reproductive toxicity

Cyantraniliprole:

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

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.

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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:

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
NOAEL : 250 mg/kg
Application Route : Oral
Exposure time : 13 weeks

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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

Components:

Cyantraniliprole:

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 : ErC50 (Pseudokirchneriella subcapitata (green algae)): 63,8

BENEVIA® (БЕНЕВИЯ®)



Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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

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:

<p>Toxicity to fish</p>	<p>: LC50 (Danio rerio (zebra fish)): 10 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials</p> <p>LC50 (Pimephales promelas (fathead minnow)): 4,6 mg/l Exposure time: 96 h Remarks: Based on data from similar materials</p>
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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
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Toxicity to algae/aquatic plants : NOEC (*Pseudokirchneriella subcapitata* (green algae)): 7,9 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0	Revision Date: 27.07.2023	SDS Number: 50000912	Date of last issue: - Date of first issue: 27.07.2023
----------------	------------------------------	-------------------------	--

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

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

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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

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 plants : EbC50 (Skeletonema costatum (Diatom)): 20 mg/l
Exposure time: 72 h

ErC50 (Skeletonema costatum (Diatom)): 98 mg/l

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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

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 %

Result: Biodegradable
Biodegradation: 65 %

Fatty acids, C6-10, Me esters:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Product:

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

Remarks: No data available

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

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.

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

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.

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.

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0 Revision Date: 27.07.2023 SDS Number: 50000912 Date of last issue: -
Date of first issue: 27.07.2023

Hygienic standards:

(Allowable concentration in air, water, including fishery waters, soil)

Components	Air	Water	Soil	Data Source
2-ethylhexan-1-ol 104-76-7	Concentration that prevents irritation, reflex reactions, odors when exposed to 20-30 minutes - maximum one-time: 0,15 mg/m ³ Limiting health hazard indicator: reflex-tory Class 4 - low hazard	Maximum Permissible Concentration 0,09 Milligrams per cubed decimeter Limiting health hazard indicator: toxic Hazard class: 4 Maximum Permissible Concentration 0,01 Milligrams per cubed decimeter Limiting health hazard indicator: sanitary and toxicological effects Hazard class: 3 Maximum Allowable Concentration: 0,15 mg/l Limiting health hazard indicator: general sanitary Hazard class: Class 3 - moderately dangerous		List 5

List 5: Order of the Russian Federal Fisheries Agency "Standards of maximum permissible concentrations of harmful substances in fishery water bodies"

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.

14. TRANSPORT INFORMATION

ADR

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

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

(Cyantraniliprole)

Class	: 9
Packing group	: III
Labels	: 9
Hazard Identification Number	: 90
Tunnel restriction code	: (-)
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 Annex II of MARPOL 73/78 and the IBC Code

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 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

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version 1.0	Revision Date: 27.07.2023	SDS Number: 50000912	Date of last issue: - Date of first issue: 27.07.2023
----------------	------------------------------	-------------------------	--

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

Full text of H-Statements

H227	Combustible liquid.
H302	Harmful if swallowed.
H303	May be harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H320	Causes eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life.
H402	Harmful to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox.	: Acute toxicity
Aquatic Acute	: Short-term (acute) aquatic hazard
Aquatic Chronic	: Long-term (chronic) aquatic hazard
Eye Dam.	: Serious eye damage
Eye Irrit.	: Eye irritation
Flam. Liq.	: Flammable liquids
Skin Irrit.	: Skin irritation
STOT SE	: Specific target organ toxicity - single exposure
2017/164/EU	: Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
RU OEL	: SanPiN 1.2.3685-21 Table 2.1, Table 2.8, Table 2.16 & Table 2.17 Maximum permissible concentrations (MPC) in the air of the working area
2017/164/EU / TWA	: Limit Value - eight hours

SAFETY DATA SHEET



BENEVIA® (БЕНЕВИЯ®)

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	27.07.2023	50000912	Date of first issue: 27.07.2023

RU OEL / MPC-STEL : Maximum Permissible Concentration - Short Term Exposure

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; 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; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Other information :

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