according to the OSHA Hazard Communication Standard



Benevia™ eVo

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SECTION 1. IDENTIFICATION

Product identifier

Product name Benevia™ eVo

Other means of identification

Product code 50002726

Recommended use of the chemical and restrictions on use

Recommended use Can be used as insecticide only.

Restrictions on useUse as recommended by the label.

Manufacturer or supplier's details

<u>Manufacturer</u> FMC Corporation

2929 WALNUT ST

PHILADELPHIA PA 19104

USA

(215) 299-6000 SDS-Info@fmc.com

<u>Supplier Address</u> FMC Corporation

2929 Walnut Street Philadelphia PA 19104

USA

Emergency telephone

For leak, fire, spill or accident emergencies, call:

1 800 / 424-9300 (CHEMTREC - U.S.A.) 1 703 / 741-5970 (CHEMTREC - International) 1 703 / 527-3887 (CHEMTREC - Alternate)

Medical emergency:

U.S.A. & Canada: +1 800 / 331-3148

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

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin sensitization : Sub-category 1B

GHS label elements

according to the OSHA Hazard Communication Standard



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Hazard pictograms :

 $\langle ! \rangle$

Signal Word : WARNING

Hazard Statements : H317 May cause an allergic skin reaction.

Precautionary Statements : Prevention:

P261 Avoid breathing mist or vapors.

P272 Contaminated work clothing must not be allowed out of

the workplace.

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.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Cyantraniliprole	736994-63-1	28.3
Fatty acids, soya, Me esters	68919-53-9	>= 20 - < 30
calcium dodecylbenzenesulphonate	26264-06-2	>= 1 - < 3
docusate sodium	577-11-7	>= 1 - < 3
2-ethylhexan-1-ol	104-76-7	>= 1 - < 3

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.

Show this material safety data sheet to the doctor in attend-

ance.

Do not leave the victim unattended.

If inhaled : Move to fresh air.

according to the OSHA Hazard Communication Standard



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If unconscious, place in recovery position and seek medical

advice.

If symptoms persist, call a physician.

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 ambu-

lance.

In case of skin contact : Wash off with soap and water.

If symptoms persist, call a physician. Wash contaminated clothing before re-use.

In case of eye contact : Flush eyes with water as a precaution.

Remove contact lenses. Protect unharmed eye.

Keep eye wide open while rinsing.

If eye irritation persists, consult a specialist.

If swallowed : Keep respiratory tract clear.

Do not give milk or alcoholic beverages.

Never give anything by mouth to an unconscious person.

If symptoms persist, call a physician.

Most important symptoms and effects, both acute and

delayed

Exposure to skin may result in mild symptoms include itching, hives or rash, and skin redness. More severe symptoms include sneezing, itchy watery eyes, and difficulty breathing.

May cause an allergic skin reaction.

Protection of first-aiders : Avoid inhalation, ingestion and contact with skin and eyes.

Notes to physician : Treat symptomatically.

SECTION 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.

Hazardous combustion prod: :

ucts

Fire may produce irritating, corrosive and/or toxic gases.

brominated compounds Nitrogen oxides (NOx)

Carbon ovides

Carbon oxides

Chlorinated compounds Hydrogen chloride Hydrogen cyanide

Hazardous combustion products

Sulfur oxides

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Specific extinguishing meth-

ods

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 cir-

cumstances 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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protec: :

tive equipment and emer-

gency 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.

Environmental precautions : Prevent further leakage or spillage if safe to do so.

Prevent product from entering drains.

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 absor-

bent material.

Pick up and transfer to properly labeled containers. Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

Advice on protection against :

fire and explosion

Normal measures for preventive fire protection.

Advice on safe handling : Do not breathe 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 ap-

plication 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.

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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.

Materials to avoid : Do not store near acids.

Further information on stor-

age stability

No decomposition if stored and applied as directed.

SECTION 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	TWA	5 ppm	ACGIH

Personal protective equipment

Respiratory protection : In case of mist, spray or aerosol exposure wear suitable per-

sonal respiratory protection and protective suit.

Hand protection

Material : Wear chemical resistant gloves, such as barrier laminate,

butyl rubber or nitrile rubber.

Remarks : The suitability for a specific workplace should be discussed

with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water

Tightly fitting safety goggles

Skin and body protection : Impervious clothing

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.

Hygiene measures : General industrial hygiene practice.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

according to the OSHA Hazard Communication Standard



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Form : liquid

Color : off-white

Odor : Faint odour

Odor Threshold : No data available

pH : 4.59

Method: CIPAC MT 75.3 (1% solution in water)

Melting point/ range : No data available

Boiling point/boiling range : No data available

Evaporation rate : No data available

Self-ignition : No data available

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : No data available

Density : 1.053 g/cm3

Solubility(ies)

Water solubility : dispersible

Partition coefficient: n-

octanol/water

No data available

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, dynamic : 730 mPa.s (68 °F / 20 °C)

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6 rpm

745 mPa.s (104 °F / 40 °C)

6 rpm

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : Non-oxidizing

Surface tension : 37.9 mN/m, Regulation (EC) No. 440/2008, Annex, A.5

Molecular weight : Not applicable

Particle size : Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : No decomposition if stored and applied as directed.

Possibility of hazardous reac-

tions

No decomposition if stored and applied as directed.

Conditions to avoid : Avoid extreme temperatures.

Avoid formation of aerosol.

Incompatible materials : Avoid strong acids, bases, and oxidizers.

Hazardous decomposition

products

Stable under recommended storage conditions.

No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Skin contact

Acute toxicity

Based on available data, the classification criteria are not met.

Product:

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

Method: OECD Test Guideline 425

GLP: yes

Assessment: The substance or mixture has no acute oral tox-

icity

according to the OSHA Hazard Communication Standard



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Remarks: no mortality

Acute inhalation toxicity : LC50: > 5.16 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: OECD Test Guideline 403 Symptoms: Breathing difficulties

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: no mortality

Acute dermal toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Method: OECD Test Guideline 402

Symptoms: Irritation

GLP: yes

Assessment: The substance or mixture has no acute dermal

toxicity

Remarks: no mortality

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 tox-

icity

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 inhala-

tion 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

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

according to the OSHA Hazard Communication Standard



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Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

oxicity

Remarks: Based on data from similar materials

docusate sodium:

Acute oral toxicity : LD50 (Rat, male and female): > 2,100 mg/kg

Method: OECD Test Guideline 401

Assessment: The substance or mixture has no acute oral tox-

icity

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : LD50 (Rabbit, male): > 10,000 mg/kg

Method: OECD Test Guideline 402

2-ethylhexan-1-ol:

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

Acute inhalation toxicity : LC50 (Rat): 4.3 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, male and female): > 3,000 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit

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

Remarks : Minimal effects that do not meet the threshold for classifica-

tion.

Components:

Cyantraniliprole:

Species : Rabbit

Assessment : No skin irritation

Method : OECD Test Guideline 404

Result : No skin irritation

Fatty acids, soya, Me esters:

Result : slight irritation

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calcium dodecylbenzenesulphonate:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

docusate sodium:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

2-ethylhexan-1-ol:

Species : Rabbit

Method : OECD Test Guideline 404

Result : Skin irritation

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Species : Rabbit

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

Remarks : Minimal effects that do not meet the threshold for classifica-

tion.

Components:

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 classifica-

tion.

Fatty acids, soya, Me esters:

Result : Irritation to eyes, reversing within 7 days

calcium dodecylbenzenesulphonate:

Species : Rabbit

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

Remarks : Based on data from similar materials

Species : Rabbit

Result : Irreversible effects on the eye

according to the OSHA Hazard Communication Standard



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Method : OECD Test Guideline 405

docusate sodium:

Species : Rabbit

Result : Risk of serious damage to eyes.
Method : OECD Test Guideline 405

2-ethylhexan-1-ol:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Method : OECD Test Guideline 405

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Based on available data, the classification criteria are not met.

Product:

Test Type : Local lymph node assay (LLNA)

Routes of exposure : Skin contact Species : Mouse

Method : OECD Test Guideline 429

Result : The product is a skin sensitizer, sub-category 1B.

Test Type : Buehler Test Routes of exposure : Skin contact Species : Guinea pig

Method : OECD Test Guideline 406
Result : Not a skin sensitizer.

Remarks : Causes sensitization.

Components:

Cyantraniliprole:

Test Type : Local lymph node test
Method : OECD Test Guideline 429

Result : Does not cause skin sensitization.

Fatty acids, soya, Me esters:

Result : Does not cause skin sensitization.

calcium dodecylbenzenesulphonate:

Test Type : Maximization Test Species : Guinea pig

Method : OECD Test Guideline 406

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Not a skin sensitizer. Result

Based on data from similar materials Remarks

docusate sodium:

Routes of exposure Skin contact Species Humans

Result Does not cause skin sensitization.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Components:

Cyantraniliprole:

Germ cell mutagenicity -

Tests on bacterial or mammalian cell cultures did not show

Assessment mutagenic effects.

calcium dodecylbenzenesulphonate:

Genotoxicity in vitro Test Type: reverse mutation assay

Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Test Type: chromosome aberration assay Genotoxicity in vivo

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.

docusate sodium:

Genotoxicity in vitro Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Genotoxicity in vivo Remarks: No data available

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

according to the OSHA Hazard Communication Standard



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Carcinogenicity

Based on available data, the classification criteria are not met.

Components:

Cyantraniliprole:

Carcinogenicity - Assess-

cinogen

ment

Fatty acids, soya, Me esters:

Carcinogenicity - Assess-

ment 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 - Assess-

ment

Weight of evidence does not support classification as a car-

Weight of evidence does not support classification as a car-

Weight of evidence does not support classification as a car-

cinogen

2-ethylhexan-1-ol:

Species Rat Application Route Oral

Exposure time 24 month(s) Result negative

IARC No ingredient of this product present at levels greater than or equal to 0.1% is

identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is

on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is

identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Components:

Cyantraniliprole:

Reproductive toxicity - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

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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 - As-

sessment

Weight of evidence does not support classification for repro-

ductive toxicity

docusate sodium:

Effects on fertility : Test Type: reproductive and developmental toxicity study

Species: Rat, male and female Application Route: Ingestion Method: OECD Test Guideline 416

Result: negative

Effects on fetal development : Test Type: reproductive and developmental toxicity study

Species: Rat

Duration of Single Treatment: 6 - 15 d Method: OECD Test Guideline 414

Result: Embryotoxic effects and adverse effects on the offspring were detected only at high maternally toxic doses

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

Based on available data, the classification criteria are not met.

Components:

Cyantraniliprole:

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

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2-ethylhexan-1-ol:

Assessment : May cause respiratory irritation.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

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

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

docusate sodium:

Species : Rat, male and female

NOAEL : 750 mg/kg

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Application Route : Oral Exposure time : 90 d

Method : OECD Test Guideline 408

2-ethylhexan-1-ol:

Species : Rat

250 mg/kg

Application Route : Oral

Exposure time : 13 Weeks

Method : OECD Test Guideline 408

Aspiration toxicity

Based on available data, the classification criteria are not met.

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 (Oncorhynchus mykiss (rainbow trout)): > 53 mg/l

Exposure time: 96 h

Test Type: Static renewal test Method: OECD Test Guideline 203

GLP: yes

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.096 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae/aquatic

plants

isms

EyC50 (Raphidocelis subcapitata (freshwater green alga)): ca.

6.6 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 201

GLP: yes

Toxicity to terrestrial organ-

: LD50 (Colinus virginianus (Bobwhite quail)): > 750 mg/kg

End point: Acute oral toxicity

Method: OECD Test Guideline 223

according to the OSHA Hazard Communication Standard



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GLP: yes

LD50 (Apis mellifera L.): 0.59 µg/bee

Exposure time: 48 d

End point: Acute oral toxicity Method: OECD Test Guideline 213

LD50 (Apis mellifera L.): 1.06 µg/bee

Exposure time: 48 d

End point: Acute contact toxicity Method: OECD Test Guideline 214

ER50 (Typhlodromus pyri.): > 1000 g/ha

LR50 (Typhlodromus pyri.): > 1000 g/ha

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

Toxicity to fish (Chronic tox-

icity)

NOEC (Cyprinodon variegatus (sheepshead minnow)): 2.9

mg/

Exposure time: 28 d

NOEC (Oncorhynchus mykiss (rainbow trout)): 0.11 mg/l

Exposure time: 21 d

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic 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

according to the OSHA Hazard Communication Standard



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NOEC (Daphnia magna (Water flea)): 0.00447 mg/l

Exposure time: 21 d

Toxicity to soil dwelling or-

ganisms

LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg

Exposure time: 14 d

Toxicity to terrestrial organ-

isms

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

Fatty acids, soya, Me esters:

Toxicity to fish : LC50 (Fish): > 1,000 mg/l

Exposure time: 96 h

LC50 (Leuciscus idus (Golden orfe)): > 100 mg/l

Exposure time: 48 h Method: ISO 7346/2

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Crustaceans): 800 - 5,243 mg/l

Exposure time: 48 h

calcium dodecylbenzenesulphonate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 10 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

LC50 (Pimephales promelas (fathead minnow)): 4.6 mg/l

Exposure time: 96 h

Remarks: Based on data from similar materials

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 3.5 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Remarks: Based on data from similar materials

Toxicity to algae/aquatic

plants

NOEC (Pseudokirchneriella subcapitata (green algae)): 7.9

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

EC50 (Pseudokirchneriella subcapitata (green algae)): 65.4

mg/l

Exposure time: 72 h

according to the OSHA Hazard Communication Standard



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Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic 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 or-

ganisms

LC50 (Eisenia fetida (earthworms)): 1,000 mg/kg

Exposure time: 14 d

Method: OECD Test Guideline 207

Toxicity to terrestrial organ-

isms

LD50 (Colinus virginianus (Bobwhite quail)): 1,356 mg/kg

Exposure time: 14 d

Method: OECD Test Guideline 223

docusate sodium:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 49 mg/l

Exposure time: 96 h

Method: Regulation (EC) No. 440/2008, Annex, C.1

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 15.2 mg/l

Exposure time: 48 h

Method: Regulation (EC) No. 440/2008, Annex, C.2

Toxicity to algae/aquatic

plants

EC50 (Desmodesmus subspicatus (green algae)): 82.5 mg/l

Exposure time: 72 h

Method: Regulation (EC) No. 440/2008, Annex, C.3

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

EC10 (Daphnia magna (Water flea)): 9 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50 (Pseudomonas putida): 164 mg/l

Exposure time: 16.5 h Method: DIN 38 412 Part 8

EC10 (Pseudomonas putida): 122 mg/l

Exposure time: 16.5 h

2-ethylhexan-1-ol:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 17.1 - 28.2 mg/l

Exposure time: 96 h

according to the OSHA Hazard Communication Standard



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Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 39 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC10 (Desmodesmus subspicatus (green algae)): 3.2 mg/l

Exposure time: 72 h

EC50 (Desmodesmus subspicatus (green algae)): 11.5 mg/l

Exposure time: 72 h

Toxicity to microorganisms : EC50 (Anabaena flos-aquae (cyanobacterium)): 16.6 mg/l

Exposure time: 72 h

Persistence and degradability

Components:

Cyantraniliprole:

Biodegradability : Remarks: Not readily biodegradable.

Fatty acids, soya, Me esters:

Biodegradability : Result: Readily biodegradable.

calcium dodecylbenzenesulphonate:

Biodegradability : Result: Readily biodegradable.

Method: OECD Test Guideline 301E

docusate sodium:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 91 % Exposure time: 28 d

2-ethylhexan-1-ol:

Biodegradability : Result: Readily biodegradable.

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

Cyantraniliprole:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): < 1 Remarks: Bioaccumulation is unlikely.

Partition coefficient: n-

octanol/water

log Pow: 1.97 (72 °F / 22 °C)

pH: 4

according to the OSHA Hazard Communication Standard



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log Pow: 2.07 (72 °F / 22 °C)

pH: 7

log Pow: 1.74 (72 °F / 22 °C)

pH: 9

Fatty acids, soya, Me esters:

Bioaccumulation Remarks: Bioaccumulation is unlikely.

calcium dodecylbenzenesulphonate:

Bioaccumulation Species: Fish

Bioconcentration factor (BCF): 70.79

Method: QSAR

Partition coefficient: n-

octanol/water

log Pow: 4.77 (77 °F / 25 °C)

docusate sodium:

Bioaccumulation Remarks: Not applicable

Partition coefficient: n-

octanol/water

log Pow: 1.998 (68 °F / 20 °C)

2-ethylhexan-1-ol:

Partition coefficient: n-

octanol/water

log Pow: 2.9 (77 °F / 25 °C)

Mobility in soil

Components:

Cyantraniliprole:

mental compartments

Distribution among environ- : Koc: 241 ml/g, log Koc: 2.38 Remarks: Mobile in soils

Other adverse effects

Product:

Ozone-Depletion Potential Regulation: 40 CFR Protection of Environment; Part 82 Pro-

tection of Stratospheric Ozone - CAA Section 602 Class I

Substances

Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological infor-

mation

An environmental hazard cannot be excluded in the event of

unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

according to the OSHA Hazard Communication Standard



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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Appropriate personal protective equipment, as described in

Sections 7 and 8, should be worn when handling materials for

waste 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
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)

Packing instruction (passen: 964

ger aircraft)

Environmentally hazardous : yes

IMDG-Code

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

964

(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.

Domestic regulation

49 CFR Road

according to the OSHA Hazard Communication Standard



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UN/ID/NA number : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(Cyantraniliprole)

Class : 9 Packing group : III

Labels : CLASS 9 ERG Code : 171

Marine pollutant : yes(Cyantraniliprole)

Remarks : Shipment by ground under DOT is non-regulated; however it

may be shipped per the applicable hazard classification to facilitate multi-modal transport involving ICAO (IATA) or IMO.

Special precautions for user

Remarks : 49CFR: no dangerous good in non-bulk packaging

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

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ	Calculated product RQ	
		(lbs)	(lbs)	
methanol	67-56-1	100	100 (F003)	

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Respiratory or skin sensitization

Serious eye damage or eye irritation

SARA 313 : This material does not contain any chemical components with

known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

2-ethylhexan-1-ol 104-76-7 >= 1 - < 5 %

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Clean Water Act

The following Hazardous Substances are listed under the U.S. CleanWater Act, Section 311, Table 116.4A:

calcium dodecylben- 26264-06-2 >= 1 - < 5 %

zenesulphonate

The following Hazardous Chemicals are listed under the U.S. CleanWater Act, Section 311, Table

117.3:

calcium dodecylben- 26264-06-2 >= 1 - < 5 %

zenesulphonate

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section

307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

US State Regulations

Massachusetts Right To Know

calcium dodecylbenzenesulphonate 26264-06-2 2-ethylhexan-1-ol 104-76-7

Pennsylvania Right To Know

736994-63-1 Cyantraniliprole Fatty acids, soya, Me esters 68919-53-9 Trioctyl Phosphate 78-42-2 7732-18-5 water Polyoxyethylene sorbitol hexaoleate 57171-56-9 calcium dodecylbenzenesulphonate 26264-06-2 2-ethylhexan-1-ol 104-76-7 methanol 67-56-1

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

California Prop. 65

WARNING: This product can expose you to chemicals including methanol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California List of Hazardous Substances

calcium dodecylbenzenesulphonate 26264-06-2

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

TCSI : Not 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 chemical substance(s) exempt from

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CEPA DSL Inventory requirements. It is regulated as a pesticide subject to Pest Control Products Act (PCPA) requirements. Read the PCPA label, authorized under the Pest Control Products Act, prior to using or handling this pest control

product.

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

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

FIFRA information

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Avoid contact with skin, eyes and clothing., Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals., Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

SECTION 16. OTHER INFORMATION

Further information

according to the OSHA Hazard Communication Standard

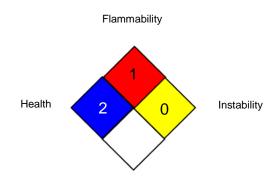


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NFPA 704:



Special hazard

0 No health threat, **1** Slightly Hazardous, **2** Hazardous, **3** Extreme danger, **4** Deadly

HMIS® IV:



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)

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

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; 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; HMIS - Hazardous Materials Identification System; 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; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the

according to the OSHA Hazard Communication Standard



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Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; 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

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End of Material Safety Data Sheet