

SAFETY DATA SHEET

CYNOFF EC INSECTICIDE



Version	Revision Date:	SDS Number:	Date of last issue: -
1.6	08/04/2023	50000365	Date of first issue: 06/28/2016

SECTION 1. IDENTIFICATION

Product identifier

Product name CYNOFF EC INSECTICIDE

Other means of identification

Product code 50000365

Recommended use of the chemical and restrictions on use

Recommended use Can be used as insecticide only.

Restrictions on use Use as recommended by the label.

Details of the supplier of the safety data sheet

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

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)

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Specific target organ toxicity : Category 2 (Nervous system)
- single exposure

Specific target organ toxicity : Category 3 (Respiratory system, Central nervous system)
- single exposure

Specific target organ toxicity : Category 2
- repeated exposure

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GHS label elements

Hazard pictograms :



Signal Word : Warning

Hazard Statements : H302 + H332 Harmful if swallowed or if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P304 + P341 IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER or doctor/ physician if you feel unwell.
P330 Rinse mouth.

Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
cypermethrin (ISO)	52315-07-8	24.81
methyl laurate	111-82-0	>= 50 - < 70
Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched	68412-54-4	>= 5 - < 10
Benzenesulfonic acid, mono-C11-13-	68953-96-8	>= 1 - < 5

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branched alkyl derivs., calcium salts		
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SECTION 4. FIRST AID MEASURES

- | | |
|---|---|
| General advice | : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended. |
| If inhaled | : Consult a physician after significant exposure.
If unconscious, place in recovery position and seek medical advice. |
| In case of skin contact | : If skin irritation persists, call a physician.
If on skin, rinse well with water.
If on clothes, remove clothes. |
| In case of eye contact | : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist. |
| If swallowed | : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital. |
| Most important symptoms and effects, both acute and delayed | : Harmful if swallowed or if inhaled.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May cause damage to organs.
May cause damage to organs through prolonged or repeated exposure. |
| Notes to physician | : Treat symptomatically. |

SECTION 5. FIRE-FIGHTING MEASURES

- | | |
|--------------------------------|---|
| Suitable extinguishing media | : Dry chemical, CO ₂ , water spray or regular foam.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | : High volume water jet |

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- | | |
|--|---|
| 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.
Nitrogen oxides (NOx)
Chlorinated compounds
Hydrogen chloride
Hydrogen cyanide
Carbon oxides |
| Further information | : 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 | : Wear self-contained breathing apparatus for firefighting if necessary. |

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | |
|---|---|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment.
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.
For disposal considerations see section 13. |
| 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 | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
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 | : Avoid formation of aerosol.
Do not breathe vapors/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations. |

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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.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : No personal respiratory protective equipment normally required.

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
Wear face-shield and protective suit for abnormal processing problems.

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.
Ensure that eye flushing systems and safety showers are located close to the working place.
Wear suitable protective equipment.

Hygiene measures : 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

Physical state : liquid

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Color	:	amber
Odor	:	soapy
Odor Threshold	:	No data available
pH	:	5.5 Concentration: 1 %
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	239 °F / 115 °C Method: closed cup
Evaporation rate	:	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	:	0.96 (68 °F / 20 °C)
Density	:	0.96 g/cm ³ (68 °F / 20 °C)
Bulk density	:	7.99 lb/gal
Solubility(ies)		
Water solubility	:	emulsifiable
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available

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Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Harmful if swallowed or if inhaled.

Product:

Acute oral toxicity	:	LD50 (Rat): 1,105 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 1.8 mg/l Exposure time: 4 h Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result	:	slight irritation
Remarks	:	Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation

Not classified based on available information.

Product:

Result	:	slight irritation
Remarks	:	May cause irreversible eye damage.

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Respiratory or skin sensitization**Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Assessment	:	Not a skin sensitizer.
Result	:	Does not cause skin sensitization.

Germ cell mutagenicity

Not classified based on available information.

Components:**cypermethrin (ISO):**

Genotoxicity in vitro	:	Test Type: Ames test Result: negative Test Type: unscheduled DNA synthesis assay Test system: rat hepatocytes Result: negative Test Type: Chromosome aberration test in vitro Metabolic activation: with and without metabolic activation Result: negative GLP: yes
Genotoxicity in vivo	:	Test Type: chromosome aberration assay Species: Chinese hamster Cell type: Bone marrow Application Route: Oral Result: negative
Germ cell mutagenicity - Assessment	:	Weight of evidence does not support classification as a germ cell mutagen.

methyl laurate:

Genotoxicity in vitro	:	Test Type: reverse mutation assay Method: OECD Test Guideline 471 Result: negative Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
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Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

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

Test Type: gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test
Result: negative
Remarks: Based on data from similar materials

Test Type: reverse mutation assay
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse (male and female)
Application Route: Oral
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.

Carcinogenicity

Not classified based on available information.

Components:

cypermethrin (ISO):

Species	: Rat
Application Route	: Oral
Exposure time	: 24 month(s)
NOAEL	: 7.5 mg/kg bw/day
Result	: negative

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

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

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

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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

Not classified based on available information.

Components:

cypermethrin (ISO):

Effects on fertility : Test Type: Two-generation study
Species: Rat
Application Route: Oral
General Toxicity F1: NOAEL: 22 mg/kg bw/day
Method: OECD Test Guideline 416
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Oral
General Toxicity Maternal: NOAEL: 12.5 mg/kg bw/day
Developmental Toxicity: NOAEL: 35 mg/kg bw/day
Method: OECD Test Guideline 426
Result: negative
GLP: yes

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

methyl laurate:

Effects on fertility : Species: Rat, male and female
Application Route: Oral
Dose: 250, 500, 1000mg/kg bw/day
General Toxicity Parent: NOAEL: $\geq$ 1,000 mg/kg bw/day
General Toxicity F1: NOAEL: 1,000 mg/kg bw/day
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Species: Rat
Application Route: Oral
Dose: 100, 300, 1000mg/kg bw/day
General Toxicity Maternal: NOAEL: 1,000 mg/kg bw/day
Teratogenicity: NOAEL: 1,000 mg/kg bw/day
Embryo-fetal toxicity.: NOAEL: 1,000 mg/kg bw/day
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

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

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assessment ductive toxicity

Effects on fetal development	: Test Type: reproductive and developmental toxicity study Species: Rat Application Route: Oral General Toxicity Maternal: NOEL: 50 mg/kg body weight Developmental Toxicity: NOAEL: 50 mg/kg body weight Symptoms: Fetal abnormalities. Result: negative Remarks: Based on data from similar materials
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Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Dermal
Developmental Toxicity: NOAEL: 500 mg/kg body weight
Symptoms: Fetal abnormalities.
Result: negative
Remarks: Based on data from similar materials

Effects on fertility	: Test Type: Three-generation study Species: Rat, male and female Application Route: Oral Dose: 14, 70, 350 mg/kg bw d General Toxicity Parent: NOAEL: 350 mg/kg body weight General Toxicity F1: NOAEL: 350 mg/kg bw/day General Toxicity F2: NOAEL: 350 mg/kg bw/day Result: negative Remarks: Based on data from similar materials
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Effects on fetal development	:	Test Type: reproductive and developmental toxicity study
		Species: Rat
		Application Route: Oral
		Dose: 0.2, 2.0, 300 and 600 mg/kg
		Duration of Single Treatment: 20 d
		General Toxicity Maternal: LOAEL: 600 mg/kg body weight
		Teratogenicity: LOAEL: 600 mg/kg bw/day
		Result: negative
		Remarks: Based on data from similar materials

Reproductive toxicity - Assessment	:	Weight of evidence does not support classification for reproductive toxicity
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May cause respiratory irritation.
May cause drowsiness or dizziness.

Assessment : May cause respiratory irritation., May cause drowsiness or dizziness.

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STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Product:

Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity

Components:

cypermethrin (ISO):

Species : Dog
NOAEL : 5 mg/kg
LOAEL : 15 mg/kg
Application Route : Oral
Exposure time : 1 yr
Dose : 1, 5, 15 mg/kg/d
Symptoms : Gastrointestinal disturbance, Neurological disorders

Species : Dog
NOAEL : 6 mg/kg bw/day
LOAEL : 18 mg/kg bw/day
Application Route : Oral
Exposure time : 90 d
Target Organs : Nervous system

Species : Rat
NOAEL : 16.7 mg/kg bw/day
LOAEL : 33.7 mg/kg bw/day
Application Route : Oral
Exposure time : 90 d
Target Organs : Nervous system

Species : Dog
NOAEL : 6 mg/kg
LOAEL : 18 mg/kg
Application Route : Oral
Exposure time : 1 yr
Dose : 3, 6, 18, 33 mg/kg/d
Method : EPA OPP 83-1
Symptoms : Tremors

Species : Rat
NOAEL : 4.5 mg/kg
Application Route : Oral
Exposure time : 2 yr
Dose : 0.6, 4.5, 30, 45 mg/kg/d
Target Organs : Liver

methyl laurate:

Species : Rat, male and female

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NOAEL	:	>= 1000 mg/kg bw/day
Dose	:	250, 500, 1000mg/kg bw/day
Method	:	OECD Test Guideline 422

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Species	:	Rat, male and female
NOAEL	:	40 mg/kg bw/day
LOAEL	:	115 mg/kg bw/day
Application Route	:	Oral - feed
Exposure time	:	6 months
Dose	:	40, 115, 340, 1030 mg/kg bw d
Remarks	:	Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Components:**cypermethrin (ISO):**

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

Experience with human exposure**Components:****cypermethrin (ISO):**

General Information	:	Symptoms: May cause paraesthesia
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Further information**Product:**

Remarks	:	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.
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SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:****cypermethrin (ISO):**

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 0.69 µg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.141 µg/l Exposure time: 48 h

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Toxicity to algae/aquatic plants	:	EC50 (algae): > 1 mg/l Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	:	NOEC (Fish): 0.015 µg/l Exposure time: 21 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Crustaceans): 0.01 µg/l Exposure time: 21 d
Toxicity to soil dwelling organisms	:	LC50 (worms): > 100 mg/kg Exposure time: 14 d
Toxicity to terrestrial organisms	:	LD50 (Colinus virginianus (Bobwhite quail)): > 2,025 mg/kg
		NOEC (Colinus virginianus (Bobwhite quail)): 150 mg/kg End point: Reproduction Test
		LD50 (Apis mellifera (bees)): 0.059 µg/bee
		LC50 (Apis mellifera (bees)): 0.033 µg/bee

Ecotoxicology Assessment

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

methyl laurate:

Toxicity to fish	:	LC50 (Oryzias latipes (Japanese medaka)): > 0.52 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.255 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (algae)): 0.179 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
		NOEC (Pseudokirchneriella subcapitata (algae)): 0.04 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.081 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	NOEC (activated sludge): >= 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

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EC50 (activated sludge): > 1,000 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): 1,000 mg/kg
 Exposure time: 56 d
 Method: OECD Test Guideline 222

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 7.9 mg/l
 Exposure time: 96 h

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 31.6 mg/l
 Exposure time: 96 h
 Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 62 mg/l
 Exposure time: 48 h
 Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 29 mg/l
 Exposure time: 96 h
 Remarks: Based on data from similar materials

NOEC (Pseudokirchneriella subcapitata (green algae)): 0.5 mg/l
 Exposure time: 96 h
 Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.23 mg/l
 Exposure time: 72 d
 Test Type: flow-through test
 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 1.18 mg/l
 Exposure time: 21 d
 Test Type: flow-through test
 Remarks: Based on data from similar materials

Toxicity to microorganisms : EC50 (activated sludge): 550 mg/l
 Exposure time: 3 h
 Method: OECD Test Guideline 209

Toxicity to soil dwelling organisms : NOEC (Eisenia fetida (earthworms)): 250 mg/kg
 Exposure time: 14 d
 Method: OECD Test Guideline 207
 Remarks: Based on data from similar materials

LC50 (Eisenia fetida (earthworms)): > 1,000 mg/kg
 Exposure time: 14 d
 Method: OECD Test Guideline 207
 Remarks: Based on data from similar materials

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Plant toxicity : EC50: 167 mg/kg
Exposure time: 21 d
Species: Sorghum bicolor (sorghum)

80 mg/kg
Exposure time: 14 d
Species: Avena sativa (oats)

Toxicity to terrestrial organisms : EC10 (Hypoaspis aculeifer): 82 mg/kg
Exposure time: 21 d
Remarks: Information given is based on data obtained from similar substances.

Persistence and degradability

Components:

cypermethrin (ISO):

Biodegradability : Result: Not readily biodegradable.

methyl laurate:

Biodegradability : Inoculum: activated sludge
Result: Readily biodegradable.
Method: OECD Test Guideline 301C

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Biodegradability : Result: Not readily biodegradable.
Remarks: Based on data from similar materials

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Biodegradability : Inoculum: activated sludge, non-adapted
Result: Not readily biodegradable.
Biodegradation: 2.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301E

Result: Inherently biodegradable.
Biodegradation: > 35 - 45 %
Exposure time: 10 d

Bioaccumulative potential

Components:

cypermethrin (ISO):

Bioaccumulation : Remarks: Accumulation in aquatic organisms is expected.

Partition coefficient: n-octanol/water : log Pow: 5 - 6 (75 °F / 24 °C)

methyl laurate:

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Bioaccumulation : Species: Oncorhynchus mykiss (rainbow trout)
Bioconcentration factor (BCF): 63
Remarks: Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 5.41 (97 °F / 36 °C)

Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.
Based on data from similar materials

Partition coefficient: n-octanol/water : log Pow: 5.39 (68 °F / 20 °C)

Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts:

Bioaccumulation : Bioconcentration factor (BCF): 3.16
Method: QSAR

Partition coefficient: n-octanol/water : log Pow: 4.595 (68 °F / 20 °C)

Mobility in soil

Components:

cypermethrin (ISO):

Distribution among environmental compartments : Remarks: immobile

Other adverse effects

Product:

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection 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 information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

Components:

cypermethrin (ISO):

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.

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

- UN number : UN 3082
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Cypermethrin)
Class : 9
Packing group : III
Labels : 9

IATA-DGR

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

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49 CFR

Not regulated as a dangerous good

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
2-methylpropan-1-ol	78-83-1	100	100 (F005)

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 : Acute toxicity (any route of exposure)
Respiratory or skin sensitization
Specific target organ toxicity (single or repeated exposure)
Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Poly(oxy-1,2-ethanediyl), al-pha-(nonylphenyl)-omega-hydroxy-, branched	68412-54-4	>= 5 - < 10 %
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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).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

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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

cypermethrin (ISO)	52315-07-8
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Pennsylvania Right To Know

methyl laurate	111-82-0
cypermethrin (ISO)	52315-07-8
Poly(oxy-1,2-ethanediyl), alpha-(nonylphenyl)-omega-hydroxy-, branched	68412-54-4
2-methylpropan-1-ol	78-83-1

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

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

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: Product contains substance(s) not listed on TSCA inventory.
AIIC	: Not in compliance with the inventory
DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL. cypermethrin (ISO)
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or 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.

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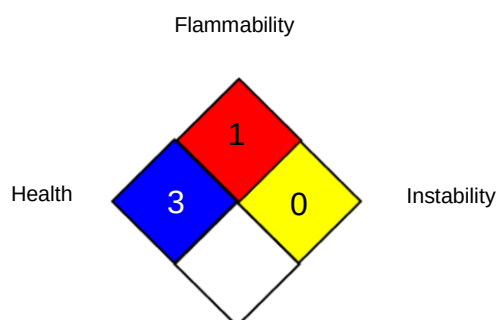


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SECTION 16. OTHER INFORMATION

Further information

NFPA 704:



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

HMIS® IV:

HEALTH	*	3
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

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

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Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the 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