

SAFETY DATA SHEET

according to the Globally Harmonized System



Fipronil 2.92% EC

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	18.09.2024	11439560-00001	Date of first issue: 18.09.2024

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Fipronil 2.92% EC

Product code : Article/SKU: D00000643 UVP: 05924596 Specification: 102000001794

Manufacturer or supplier's details

Company : 2022 ES Discovery India Private Limited
Zenja Building,
7th Floor, Hiranandani Circle

Address : Hiranandani Estate, Thane (W)
Maharashtra 400607

Telephone : +91-22-50023540

Emergency telephone number : 000 800 1007 141

Telefax : +91-22-50972774

Recommended use of the chemical and restrictions on use

Recommended use : Insecticide

Restrictions on use : Not applicable

2. HAZARDS IDENTIFICATION

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989

Classification

Flammable liquid

GHS Classification

Flammable liquids : Category 4

Acute toxicity (Oral) : Category 5

Acute toxicity (Dermal) : Category 5

Skin corrosion/irritation : Category 2

Carcinogenicity : Category 2

Specific target organ toxicity - repeated exposure : Category 2 (Central nervous system, Kidney)

Aspiration hazard : Category 1

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Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

GHS label elements

Hazard pictograms : 

Signal word : Danger

Hazard statements : H227 Combustible liquid.
H303 + H313 May be harmful if swallowed or in contact with skin.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs (Central nervous system, Kidney) through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P203 Obtain, read and follow all safety instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260 Do not breathe mist or vapours.
P264 Wash hands thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P316 IF SWALLOWED: Get emergency medical help immediately.
P302 + P352 + P317 IF ON SKIN: Wash with plenty of water. Get medical help.
P318 IF exposed or concerned, get medical advice.
P321 Specific treatment (see supplemental first aid instructions on this label).
P331 Do NOT induce vomiting.
P332 + P317 If skin irritation occurs: Get medical help.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Storage:
P405 Store locked up.

Disposal:

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

Other hazards which do not result in classification

Vapours may form explosive mixture with air.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Emulsifiable concentrate (EC)

Components

Chemical name	CAS-No.	Concentration (% w/w)
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Not Assigned	>= 70 - < 90
Tributyl phosphate	126-73-8	>= 10 - < 20
Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate	68412-53-3	>= 5 - < 10
Nonylphenol ethoxylated	68412-54-4	>= 3 - < 5
Fipronil	120068-37-3	>= 2.5 - < 5

4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
If vomiting occurs have person lean forward.
Call a physician or poison control centre immediately.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed : The following symptoms may occur:
restlessness
anxiety
Somnolence
Dizziness

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Convulsions
Headache
Nausea
Tremors
Aspiration may cause pulmonary oedema and pneumonitis.
May be harmful if swallowed or in contact with skin.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Suspected of causing cancer.
May cause damage to organs through prolonged or repeated exposure.
There may be delayed neurological effects, including brain oedema.
Must not be confused with organophosphorous compounds!

- Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
- Notes to physician : There is no specific antidote available.
Symptoms of poisoning may appear several hours later.
Keep under medical supervision for at least 48 hours.
Oxygen or artificial respiration if needed.
Keep respiratory tract clear.
Carefully monitor the respiratory functions.
In case of aspiration intubation and bronchial lavage should be considered.
In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours.
However, the application of activated charcoal and sodium sulphate is always advisable.
In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens.
Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.

5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
- Hazardous combustion prod- : Carbon oxides

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ucts

Oxides of phosphorus
Nitrogen oxides (NO_x)
Sulphur oxides
Chlorine compounds
Fluorine compounds

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE

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CONTROLS/PERSONAL PROTECTION section.

- Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.
Do not breathe mist or vapours.
Do not swallow.
Avoid contact with eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labelled containers.
Store locked up.
Keep tightly closed.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Keep away from heat and sources of ignition.
- Materials to avoid : Do not store with the following product types:
Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Not Assigned	TWA (Mist)	5 mg/m ³	IN OEL
		STEL (Mist)	10 mg/m ³	IN OEL
		TWA (Inhalable particulate matter)	5 mg/m ³	ACGIH
Tributyl phosphate	126-73-8	TWA	0.2 ppm 2.5 mg/m ³	IN OEL
		TWA (Inhalable fraction and vapor)	5 mg/m ³	ACGIH

- Engineering measures : Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

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Personal protective equipment

Filter type	: Organic vapour type
Hand protection	
Material	: Nitrile rubber
Break through time	: > 480 min
Glove thickness	: > 0.4 mm
Protective index	: Class 6
Remarks	: Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Eye protection	: Wear the following personal protective equipment: Safety glasses
Skin and body protection	: Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	: If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: colourless, light yellow
Odour	: No data available
Odour Threshold	: No data available
pH	: 3 - 4 (23 °C) Concentration: 1 %

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	deionised water
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: $\geq 80\text{ }^{\circ}\text{C}$
	Method: closed cup
Evaporation rate	: No data available
Flammability (solid, gas)	: Not applicable
Flammability (liquids)	: Ignitable (see flash point)
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapour pressure	: No data available
Relative vapour density	: No data available
Density	: ca. 0.86 g/cm^3 ($20\text{ }^{\circ}\text{C}$)
Solubility(ies)	
Water solubility	: dispersible
Partition coefficient: n-octanol/water	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, kinematic	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.
Particle characteristics	
Particle size	: Not applicable

10. STABILITY AND REACTIVITY

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Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Combustible liquid. Vapours may form explosive mixture with air. Can react with strong oxidizing agents.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: No hazardous decomposition products are known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

May be harmful if swallowed or in contact with skin.

Product:

Acute oral toxicity	: LD50(Rat): 2,400 mg/kg
Acute inhalation toxicity	: Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	: LD50(Rat): > 2,000 mg/kg

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg Remarks: Based on data from similar materials
Acute dermal toxicity	: LD50 (Rat): > 2,000 mg/kg Remarks: Based on data from similar materials

Tributyl phosphate:

Acute oral toxicity	: LD50 (Rat): 1,552 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 4.242 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	: LD50 (Rabbit): > 3,100 mg/kg

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Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Acute oral toxicity : LD50 (Rat): 4,450 mg/kg
Method: OECD Test Guideline 401

Nonylphenol ethoxylated:

Acute oral toxicity : LD50 (Rat): 1,980 mg/kg
Acute dermal toxicity : LD50 (Rabbit): > 3,000 mg/kg

Fipronil:

Acute oral toxicity : LD50 (Rat): 92 mg/kg
Acute inhalation toxicity : LC50 (Rat): 0.36 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Acute dermal toxicity : LD50 (Rabbit): 354 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials
Assessment : Repeated exposure may cause skin dryness or cracking.

Tributyl phosphate:

Result : Skin irritation
Remarks : Based on national or regional regulation.

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Species : Rabbit
Result : Skin irritation

Nonylphenol ethoxylated:

Species : Rabbit
Result : Skin irritation

Fipronil:

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

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Serious eye damage/eye irritation

Not classified based on available information.

Product:

Species	:	Rabbit
Result	:	No eye irritation

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Species	:	Rabbit
Result	:	No eye irritation
Remarks	:	Based on data from similar materials

Tributyl phosphate:

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

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Species	:	Rabbit
Method	:	Draize Test
Result	:	Irreversible effects on the eye

Nonylphenol ethoxylated:

Species	:	Rabbit
Method	:	Draize Test
Result	:	Irreversible effects on the eye

Fipronil:

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

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	negative
Remarks	:	Based on data from similar materials

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Tributyl phosphate:

Exposure routes	: Skin contact
Species	: Guinea pig
Result	: negative

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Exposure routes	: Skin contact
Species	: Humans
Result	: negative

Nonylphenol ethoxylated:

Test Type	: Maximisation Test
Exposure routes	: Skin contact
Species	: Guinea pig
Result	: negative

Fipronil:

Test Type	: Buehler Test
Exposure routes	: Skin contact
Species	: Guinea pig
Method	: OECD Test Guideline 406
Result	: negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Remarks: Based on data from similar materials
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Tributyl phosphate:

Genotoxicity in vitro	: Test Type: Chromosome aberration test in vitro Result: negative Test Type: In vitro mammalian cell gene mutation test Result: negative Test Type: Bacterial reverse mutation assay (AMES) Result: negative
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Genotoxicity in vivo	: Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Rat Application Route: Ingestion Result: negative
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Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

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

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 486
Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:

Tributyl phosphate:

Species : Rat
Application Route : Ingestion
Exposure time : 24 month(s)
Result : positive

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Fipronil:

Species : Mouse
Application Route : Ingestion
Exposure time : 78 weeks
Method : Directive 67/548/EEC, Annex V, B.32.
Result : negative

Species : Rat
Application Route : Ingestion
Exposure time : 104 weeks
Method : Directive 67/548/EEC, Annex, B.33
Result : positive

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Remarks : The mechanism or mode of action is not relevant in humans.

Reproductive toxicity

Not classified based on available information.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: inhalation (vapour)
Result: negative

Tributyl phosphate:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative

Fipronil:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

May cause damage to organs (Central nervous system, Kidney) through prolonged or repeated exposure.

Components:

Fipronil:

Exposure routes : Ingestion
Target Organs : Central nervous system, Kidney
Assessment : Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

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Repeated dose toxicity

Components:

Tributyl phosphate:

Species	:	Mouse
LOAEL	:	> 300 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days

Fipronil:

Species	:	Rabbit
NOAEL	:	5 mg/kg
LOAEL	:	10 mg/kg
Application Route	:	Skin contact
Exposure time	:	21 Days
Method	:	OECD Test Guideline 410

Species	:	Rat, male
NOAEL	:	0.059 mg/kg
LOAEL	:	0.019 mg/kg
Application Route	:	Ingestion
Exposure time	:	89 Weeks
Method	:	Directive 67/548/EEC, Annex, B.33

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203
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Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
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Toxicity to algae/aquatic	:	EL50 (Pseudokirchneriella subcapitata (green algae)): >
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plants

1,000 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

NOELR (*Pseudokirchneriella subcapitata* (green algae)):
1,000 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Tributyl phosphate:

Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 4.2 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 2.6 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (*Desmodesmus subspicatus* (green algae)): 2.8 mg/l
Exposure time: 72 h

EC10 (*Desmodesmus subspicatus* (green algae)): 0.92 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC50: 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0.82 mg/l
Exposure time: 95 d
Species: *Oncorhynchus mykiss* (rainbow trout)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.87 mg/l
Exposure time: 21 d
Species: *Daphnia magna* (Water flea)

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): > 0.1 - 1 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)): > 0.1 - 1 mg/l
Exposure time: 48 h
Method: ISO 6341
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): > 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (*Raphidocelis subcapitata* (freshwater green alga)): >

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1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC10 (activated sludge): > 1 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC: > 0.1 - 1 mg/l
Exposure time: 100 d
Species: *Oryzias latipes* (Japanese medaka)
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.001 - 0.01 mg/l
Exposure time: 28 d
Species: *Mysidopsis bahia* (opossum shrimp)
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

Nonylphenol ethoxylated:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): > 0.1 - 1 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)): > 0.1 - 1 mg/l
Exposure time: 48 h
Method: ISO 6341
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (*Raphidocelis subcapitata* (freshwater green alga)): > 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOEC (*Raphidocelis subcapitata* (freshwater green alga)): > 1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC10 (activated sludge): > 1 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

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Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : NOEC: > 0.1 - 1 mg/l
Exposure time: 100 d
Species: *Oryzias latipes* (Japanese medaka)
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0.001 - 0.01 mg/l
Exposure time: 28 d
Species: *Mysidopsis bahia* (opossum shrimp)
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 10

Fipronil:

Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill sunfish)): 85.2 µg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : LC50 (*Mysidopsis bahia* (opossum shrimp)): 0.14 µg/l
Exposure time: 96 h

Toxicity to algae/aquatic plants : EC50 (*Desmodesmus subspicatus* (green algae)): 68 µg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

NOEC (*Desmodesmus subspicatus* (green algae)): 40 µg/l
Exposure time: 96 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1,000

Toxicity to microorganisms : EC50: > 1,000 mg/l
Exposure time: 3 h

Toxicity to fish (Chronic toxicity) : NOEC: 2.9 µg/l
Exposure time: 35 d
Species: *Cyprinodon variegatus* (sheepshead minnow)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0.0077 µg/l
Exposure time: 28 d
Species: *Mysidopsis bahia* (opossum shrimp)

M-Factor (Chronic aquatic toxicity) : 10,000

Toxicity to soil dwelling organisms : LC50: > 1,000 mg/kg
Species: *Eisenia fetida* (earthworms)

Toxicity to terrestrial organisms : LD50: > 5,000 mg/kg
Species: *Anas platyrhynchos* (Mallard duck)

LD50: 11.3 mg/kg

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Species: *Colinus virginianus* (Bobwhite quail)

LD50: 0.0064 µg/bee

Species: *Apis mellifera* (bees)

Persistence and degradability

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 69 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Tributyl phosphate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 92 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate :

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

Nonylphenol ethoxylated:

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

Fipronil:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 47 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

Tributyl phosphate:

Bioaccumulation : Species: *Cyprinus carpio* (Carp)
Bioconcentration factor (BCF): 6.9 - 20

Partition coefficient: n-octanol/water : log Pow: 4

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate :

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Expert judgement

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Nonylphenol ethoxylated:

Partition coefficient: n-octanol/water : log Pow: < 4
Remarks: Calculation

Fipronil:

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)
Bioconcentration factor (BCF): 321

Partition coefficient: n-octanol/water : log Pow: 4

Mobility in soil

No data available

Other adverse effects

No data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.
Do not dispose of waste into sewer.

Contaminated packaging : Follow advice on product label and/or leaflet.
Empty containers retain residue and can be dangerous.
Do not re-use empty containers.

14. TRANSPORT INFORMATION

International Regulations

UNRTDG

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

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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. (Fipronil)
Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to IMO instruments

Not applicable for product as supplied.

Special precautions for user

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

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

Product Type : Insecticides, acaricides and products to control other arthropods
Active substance : 25 g/l
Fipronil

16. OTHER INFORMATION

Revision Date : 18.09.2024

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
IN OEL : India. Permissible levels of certain chemical substances in work environment.

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

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IN OEL / TWA : Time-Weighted Average Concentration (TWA) (8 hrs.)
IN OEL / STEL : Short-term exposure Limit STEL (15 min)

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

IN / EN