

# **Fipronil Formulation**

Version Revision Date: SDS Number: Date of last issue: 14.06.2024 5.0 06.07.2024 4789412-00013 Date of first issue: 27.08.2019

**Section 1: Identification** 

**Product identifier** : Fipronil Formulation

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product Restrictions on use : Not applicable

Manufacturer or supplier's details

Company : MSD

Address : 50 Tuas West Drive

Singapore - Singapore 638408

Telephone : +1-908-740-4000

Emergency telephone number : 65 6697 2111 (24/7/365)

E-mail address : EHSDATASTEWARD@msd.com

### Section 2: Hazard identification

Classification of the substance or mixture

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 3

Skin corrosion/irritation : Category 2

Serious eye damage/eye irri-

tation

Category 2

Specific target organ toxicity - :

repeated exposure

: Category 2 (Central nervous system, Kidney)

Short-term (acute) aquatic

hazard

Category 1

Long-term (chronic) aquatic

hazard

Category 1

GHS Label elements, including precautionary statements





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Hazard pictograms :









Signal word : Danger

Hazard statements : H226 Flammable liquid and vapour.

H302 Harmful if swallowed. H315 Causes skin irritation.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

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:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P241 Use explosion-proof electrical/ ventilating/ lighting equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P260 Do not breathe mist or vapours.

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

### Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON

CENTER/ doctor if you feel unwell. Rinse mouth.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediate-

ly all contaminated clothing. Rinse skin with water.

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P314 Get medical advice/ attention if you feel unwell.

P332 + P313 If skin irritation occurs: Get medical advice/ atten-

tion.

P337 + P313 If eye irritation persists: Get medical advice/ attention

P391 Collect spillage.

#### Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

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### Disposal:

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.

## Section 3: Composition/information on ingredients

Substance / Mixture Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
2-Butoxyethanol	111-76-2	>= 70 -< 90
Ethanol#	64-17-5	>= 10 -< 20
Fipronil (ISO)	120068-37-3	>= 1 -< 2.5

<sup>#</sup> Voluntarily-disclosed substance

### Section 4: First-aid measures

## Description of necessary first-aid measures

General advice In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled If inhaled, remove to fresh air.

> If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Get medical attention.

In case of contact, immediately flush skin with plenty of water In case of skin contact

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 In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention.

If swallowed If swallowed, DO NOT induce vomiting unless directed to do

> so by medical personnel. Get medical attention.

Rinse mouth thoroughly with water.

Never give anything by mouth to an unconscious person.

### Most important symptoms and effects, both acute and delayed

Risks Harmful if swallowed.

> Causes skin irritation. Causes serious eye irritation.

Toxic if inhaled.





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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).

Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

### Section 5: Fire-fighting measures

### **Extinguishing media**

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

High volume water jet

### Special hazards arising from the substance or mixture

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: :

ucts

Nitrogen oxides (NOx)

Sulphur oxides Carbon oxides Chlorine compounds Fluorine compounds

### Special protective actions for fire-fighters

Special protective equipment :

for firefighters

c. mm

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances 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.

## Section 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

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**Environmental precautions** 

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

Methods for 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 absor-

bent.

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 deter-

mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

## Section 7: Handling and storage

## Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

Use explosion-proof electrical, ventilating and lighting equip-

ment.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe mist or vapours.

Do not swallow. Do not get in eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Non-sparking tools should be used. 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





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environment.

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.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

Conditions for safe storage, including any incompatibilities

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.

: Do not store with the following product types:

Self-reactive substances and mixtures

Organic peroxides Oxidizing agents Flammable gases Pyrophoric liquids Pyrophoric solids

Self-heating substances and mixtures

Poisonous gases Explosives

Section 8: Exposure controls/personal protection

### **Control parameters**

Materials to avoid

## **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis			
2-Butoxyethanol	111-76-2	PEL (long term)	25 ppm 121 mg/m3	SG OEL			
		TWA	20 ppm	ACGIH			
Ethanol	64-17-5	PEL (long term)	1,000 ppm 1,880 mg/m3	SG OEL			
		STEL	1,000 ppm	ACGIH			
Fipronil (ISO)	120068-37-3	TWA	2 μg/m3 (OEB 4)	Internal			
·	Further inform	Further information: Skin					
		Wipe limit	20 µg/100 cm2	Internal			





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### **Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling time	Permissible concentration	Basis
2-Butoxyethanol	111-76-2	Butoxyace- tic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g creatinine	ACGIH BEI

Appropriate engineering control measures

 All engineering controls should be implemented by facility design and operated in accordance with GMP principles to

protect products, workers, and the environment.

Essentially no open handling permitted.

Use closed processing systems or containment technologies. If handled in a laboratory, use a properly designed biosafety cabinet, fume hood, or other containment device if the potential exists for aerosolization. If this potential does not exist, handle over lined trays or benchtops.

Use explosion-proof electrical, ventilating and lighting equipment

### Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection : Wear safety glasses with side shields or goggles.

If the work environment or activity involves dusty conditions,

mists or aerosols, wear the appropriate goggles.

Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or

aerosols.

Skin protection : Work uniform or laboratory coat.

Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, dis-

posable suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type
Hand protection

: Combined particulates and organic vapour type

Material : Chemical-resistant gloves

Remarks : Consider double gloving. Take note that the product is flam-

mable, which may impact the selection of hand protection.

### Section 9: Physical and chemical properties

Appearance : liquid



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Colour : yellow

Odour : characteristic

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

78.5 °C

Flash point : 29 °C

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : Not applicable

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 : 0.91 - 0.95

Relative density : 0.91 - 0.95

Density : No data available

Solubility(ies)

Water solubility : slightly soluble

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.





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Molecular weight : No data available

Particle characteristics

Particle size : Not applicable

Section 10: Stability and reactivity

Reactivity : Not classified as a reactivity hazard. Chemical stability : Stable under normal conditions.

Possibility of hazardous reac- :

tions

Flammable liquid and vapour. Vapours may form explosive mixture with air.

Can react with strong oxidizing agents.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Oxi

Hazardous decomposition

products

Oxidizing agents

No hazardous decomposition products are known.

**Section 11: Toxicological information** 

Information on likely routes of : Inhalation

exposure

Acute toxicity

Harmful if swallowed. Toxic if inhaled.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: 1,290 mg/kg

Skin contact

Ingestion Eye contact

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2,000 mg/kg

Method: Calculation method

**Components:** 

2-Butoxyethanol:

Acute oral toxicity : LD50 (Guinea pig): 1,200 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l

Exposure time: 4 h
Test atmosphere: vapour
Method: Expert judgement



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Acute dermal toxicity : LD50 (Guinea pig): > 2,000 mg/kg

**Ethanol:** 

Acute oral toxicity : LD50 (Rat): 10,470 mg/kg

Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat, male): 116.9 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): > 15,800 mg/kg

Fipronil (ISO):

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:

2-Butoxyethanol:

Species : Rabbit

Method : Directive 67/548/EEC, Annex V, B.4.

Result : Skin irritation

**Ethanol:** 

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Fipronil (ISO):

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

2-Butoxyethanol:

Species : Rabbit



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Result : Irritation to eyes, reversing within 21 days

Method : OECD Test Guideline 405

**Ethanol:** 

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Method : OECD Test Guideline 405

Fipronil (ISO):

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

## Respiratory or skin sensitisation

### Skin sensitisation

Not classified based on available information.

### Respiratory sensitisation

Not classified based on available information.

#### **Components:**

### 2-Butoxyethanol:

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

Method : OECD Test Guideline 406

Result : negative

**Ethanol:** 

Test Type : Mouse ear swelling test (MEST)

Exposure routes : Skin contact
Species : Mouse
Result : negative

Fipronil (ISO):

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.





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**Components:** 

2-Butoxyethanol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Test Type: In vitro sister chromatid exchange assay in mam-

malian cells Result: equivocal

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Rat

Application Route: Intraperitoneal injection

Result: negative

Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Intraperitoneal injection

Result: negative

**Ethanol:** 

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

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Rat

Application Route: Ingestion

Result: negative

Fipronil (ISO):

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471

Result: negative





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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

Not classified based on available information.

### Components:

### 2-Butoxyethanol:

Species : Rat

Application Route : inhalation (vapour)

Exposure time : 2 Years
Result : negative

Fipronil (ISO):

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

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

### Reproductive toxicity

Not classified based on available information.





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**Components:** 

2-Butoxyethanol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Mouse

Application Route: Ingestion

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (vapour)

Result: negative

**Ethanol:** 

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Mouse

Application Route: Ingestion

Result: negative

Fipronil (ISO):

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Effects on foetal develop-

ment

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 (ISO):

Exposure routes : Ingestion

Target Organs : Central nervous system, Kidney

Assessment : Shown to produce significant health effects in animals at con-

centrations of 10 mg/kg bw or less.



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### Repeated dose toxicity

## **Components:**

**Ethanol:** 

Species : Rat

NOAEL : 1,730 mg/kg LOAEL : 3,200 mg/kg Application Route : Ingestion Exposure time : 90 Days

Fipronil (ISO):

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**

Not classified based on available information.

## **Section 12: Ecological information**

### **Toxicity**

### **Components:**

2-Butoxyethanol:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,464 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 1,800 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

ErC50 (Pseudokirchneriella subcapitata (green algae)): 1,840

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

EC10 (Pseudokirchneriella subcapitata (green algae)): 679





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mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to fish (Chronic tox-

icity)

NOEC (Danio rerio (zebra fish)): > 100 mg/l

Exposure time: 21 d

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

EC10 (Daphnia magna (Water flea)): 134 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

**Ethanol:** 

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 14,200 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Ceriodaphnia dubia (water flea)): 5,012 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l

Exposure time: 72 h

EC10 (Chlorella vulgaris (Fresh water algae)): 11.5 mg/l

Exposure time: 72 h

Toxicity to fish (Chronic tox-

icity)

NOEC (Oryzias latipes (Japanese medaka)): >= 79 mg/l

Exposure time: 100 d

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 9.6 mg/l

Exposure time: 9 d

Toxicity to microorganisms

EC50 (Protozoa): 5,800 mg/l

Exposure time: 4 h

Fipronil (ISO):

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 tox-

icity)

: 1,000

Toxicity to fish (Chronic tox- : NOEC (Cyprinodon variegatus (sheepshead minnow)): 2.9





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icity) μg/l

Exposure time: 35 d

Exposure time: 28 d

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

M-Factor (Chronic aquatic

toxicity)

Toxicity to microorganisms EC50: > 1,000 mg/l

Exposure time: 3 h

10,000

Persistence and degradability

**Components:** 

2-Butoxyethanol:

Biodegradability Result: Readily biodegradable.

Biodegradation: 90.4 % Exposure time: 28 d

Method: OECD Test Guideline 301B

NOEC (Mysidopsis bahia (opossum shrimp)): 0.0077 µg/l

**Ethanol:** 

Biodegradability Result: Readily biodegradable.

Biodegradation: 84 % Exposure time: 20 d

Fipronil (ISO):

Result: Not readily biodegradable. Biodegradability

Biodegradation: 47 % Exposure time: 28 d

Method: OECD Test Guideline 301B

Bioaccumulative potential

**Components:** 

2-Butoxyethanol:

Partition coefficient: n-

octanol/water

log Pow: 0.81

**Ethanol:** 

Partition coefficient: n-

octanol/water

log Pow: -0.35

Fipronil (ISO):

Bioaccumulation Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 321

Partition coefficient: n-

octanol/water

log Pow: 4





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Mobility in soil

No data available

Other adverse effects

No data available

**Section 13: Disposal considerations** 

**Disposal methods** 

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

Empty containers retain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death. If not otherwise specified: Dispose of as unused product.

**Section 14: Transport information** 

International Regulations

**UNRTDG** 

UN number : UN 1992

UN proper shipping name : FLAMMABLE LIQUID, TOXIC, N.O.S.

(Ethanol, Fipronil (ISO))

Transport hazard class(es) : 3
Subsidiary risk : 6.1
Packing group : III
Labels : 3 (6.1)
Environmental hazards : no

IATA-DGR

UN/ID No. : UN 1992

UN proper shipping name : Flammable liquid, toxic, n.o.s.

(Ethanol, Fipronil (ISO))

Transport hazard class(es) : 3
Subsidiary risk : 6.1
Packing group : III

Labels : Flammable Liquids, Toxic

Packing instruction (cargo

aircraft)

Packing instruction (passen: 355

ger aircraft)

**IMDG-Code** 

UN number : UN 1992

Proper shipping name : FLAMMABLE LIQUID, TOXIC, N.O.S.

366

(Ethanol, Fipronil (ISO))

Transport hazard class(es) : 3
Subsidiary risk : 6.1
Packing group : III





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Labels : 3 (6.1)
EmS Code : F-E, S-D
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.

### **Section 15: Regulatory information**

### Safety, health and environmental regulations specific for the product in question

Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Protection and Management Act and : Fipronil

Environmental Protection and Management (Hazard-

ous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) : Ethanol

Regulations

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

AICS : not determined

DSL : not determined

IECSC : not determined

### **Section 16: Other information**

Revision Date : 06.07.2024

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 Agen-

cy, http://echa.europa.eu/

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)





Version Revision Date: SDS Number: Date of last issue: 14.06.2024 5.0 06.07.2024 4789412-00013 Date of first issue: 27.08.2019

SG OEL : Singapore. Workplace Safety and Health (General Provisions)

Regulations - First Schedule Permissible Exposure Limits of

Toxic Substances.

ACGIH / TWA : 8-hour, time-weighted average ACGIH / STEL : Short-term exposure limit

SG OEL / PEL (long term) : Permissible Exposure Level (PEL) Long Term

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; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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.

SG / EN