according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 6328807-00011 5.0 2024/09/28 Date of first issue: 2020/09/11

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Deltamethrin (1%) Formulation Product name

Manufacturer or supplier's details

Company MSD

Address No. 485 Jing Tai Road

Pu Tuo District - Shanghai - China 200331

Telephone +1-908-740-4000

Emergency telephone number: 86-571-87268110

E-mail address EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use Veterinary product Restrictions on use Not applicable

#### 2. HAZARDS IDENTIFICATION

#### **Emergency Overview**

**Appearance** liquid Colour yellow

Odour No data available

Causes mild skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

**GHS Classification** 

Skin corrosion/irritation Category 3

Serious eye damage/eye irri-

Category 2A

tation

Skin sensitisation Category 1

Specific target organ toxicity - :

repeated exposure

Category 2

Short-term (acute) aquatic

hazard

Category 1

Long-term (chronic) aquatic Category 1

according to GB/T 16483 and GB/T 17519



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hazard

**GHS** label elements

Hazard pictograms







Signal word : Warning

Hazard statements : H316 Causes mild skin irritation.

H317 May cause an allergic skin reaction. H319 Causes serious eye irritation.

H373 May cause damage to organs through prolonged or re-

peated exposure.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention:

P260 Do not breathe mist or vapours.

P264 Wash skin thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of

the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.

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.

P333 + P313 If skin irritation or rash occurs: Get medical ad-

vice/ attention.

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

tention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

P391 Collect spillage.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

Physical and chemical hazards

Not classified based on available information.

**Health hazards** 

Causes mild skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure.

according to GB/T 16483 and GB/T 17519



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#### **Environmental hazards**

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

#### Other hazards which do not result in classification

Cutaneous sensations may occur, such as burning or stinging on the face and mucosae. However, these sensations cause no lesions and are of a transitory nature (max. 24 hours).

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Soya oil	8001-22-7	>= 50 -< 70
Cyclohexanone	108-94-1	>= 2.5 -< 3
deltamethrin (ISO)	52918-63-5	>= 1 -< 2.5

#### 4. 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.

Get medical attention.

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

Remove 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, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Most important symptoms

and effects, both acute and

delayed

Causes mild skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

May cause damage to organs through prolonged or repeated

exposure.

This product contains a pyrethroid.

Pyrethroid poisoning should not be confused with carbamate

or organophosphate poisoning.

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 : Treat symptomatically and supportively.

#### 5. FIREFIGHTING MEASURES

according to GB/T 16483 and GB/T 17519



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Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire-

fighting

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides

Nitrogen oxides (NOx) Bromine compounds

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.

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 emer-

gency procedures

Use personal protective equipment.

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

tective 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

parriers).

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

Soak up with inert absorbent material.

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

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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certain local or national requirements.

# 7. HANDLING AND STORAGE

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.

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

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

Take care to prevent spills, waste and minimize release to the

environment.

Avoidance of contact : Oxidizing agents

**Storage** 

Conditions for safe storage : Keep in properly labelled containers.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Packaging material : Unsuitable material: None known.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration			
Cyclohexanone	108-94-1	PC-TWA	50 mg/m3	CN OEL		
	Further information: Skin					
		TWA	20 ppm	ACGIH		
		STEL	50 ppm	ACGIH		
deltamethrin (ISO)	52918-63-5	PC-TWA	0.03 mg/m3	CN OEL		
		TWA	15 μg/m3 (OEB 3)	Internal		
	Further information: DSEN, Skin					
		Wipe limit	100 μg/100 cm <sup>2</sup>	Internal		

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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### **Biological occupational exposure limits**

Components	CAS-No.	Control parameters	Biological specimen	Sam- pling time	Permissible concentration	Basis
Cyclohexanone	108-94-1	1,2- Cyclohex- anediol	Urine	End of shift at end of work- week	80 mg/l	ACGIH BEI
		Cyclohexa- nol	Urine	End of shift (As soon as possible after exposure ceases)	8 mg/l	ACGIH BEI

**Engineering measures** 

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., dripless quick connections).

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of the compound to uncontrolled areas (e.g., open-face containment devices).

Minimize open handling.

Personal protective equipment

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

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Combined particulates and organic vapour type Filter type

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

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 and body 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.

Hand protection

Material Chemical-resistant gloves

Remarks Consider double gloving.

Hygiene measures If exposure to chemical is likely during typical use, provide

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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eye flushing systems and safety showers close to the work-

ing place.

When using do not eat, drink or smoke.

Contaminated work clothing should not be allowed out of the

workplace.

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.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : yellow

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

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

Relative density : No data available

Density : 0.85 - 0.95 g/cm<sup>3</sup>

Solubility(ies)

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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Water solubility : No data available

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.

Molecular weight : No data available

Particle characteristics

Particle size : Not applicable

#### 10. STABILITY AND REACTIVITY

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

Possibility of hazardous reac-

tions

: Can react with strong oxidizing agents.

Conditions to avoid : None known. Incompatible materials : Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

#### 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation

Skin contact Ingestion Eye contact

**Acute toxicity** 

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 40 mg/l

Exposure time: 4 h

Test atmosphere: vapour Method: Calculation method

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Components:** 

**Cyclohexanone:** 

Acute oral toxicity : LD50 (Rat): 1,620 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 11 mg/l

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

: LD50 (Rabbit): > 1,000 - 2,000 mg/kg Acute dermal toxicity

deltamethrin (ISO):

Acute oral toxicity : LD50 (Rat): 66.7 mg/kg

LD50 (Rat): 9 - 139 mg/kg

LD50 (Mouse): 19 - 34 mg/kg

: LC50 (Rat): 0.8 mg/l Acute inhalation toxicity

Exposure time: 2 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): 2,000 mg/kg

LD50 (Rat): > 800 mg/kg

Acute toxicity (other routes of : LD50 (Rat): 2.5 mg/kg

administration)

Application Route: Intravenous

LD50 (Mouse): 10 mg/kg

Application Route: Intraperitoneal

Skin corrosion/irritation

Causes mild skin irritation.

**Components:** 

Cyclohexanone:

Species : Rabbit

: OECD Test Guideline 404 Method

Result : Skin irritation

deltamethrin (ISO):

Species Rabbit

Result No skin irritation

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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### Serious eye damage/eye irritation

Causes serious eye irritation.

#### **Components:**

#### Cyclohexanone:

Species : Rabbit

Result : Irreversible effects on the eye

### deltamethrin (ISO):

Species : Rabbit

Result : Moderate eye irritation

### Respiratory or skin sensitisation

#### Skin sensitisation

May cause an allergic skin reaction.

### Respiratory sensitisation

Not classified based on available information.

### **Components:**

### Cyclohexanone:

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

# deltamethrin (ISO):

Test Type : Maximisation Test

Exposure routes : Dermal
Species : Guinea pig
Result : negative

Test Type : Human repeat insult patch test (HRIPT)

Exposure routes : Dermal Species : Humans Result : positive

# Germ cell mutagenicity

Not classified based on available information.

# **Components:**

### Cyclohexanone:

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

Method: OECD Test Guideline 471

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 5.0 2024/09/28 6328807-00011 Date of first issue: 2020/09/11

Result: negative

Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro)

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)

Species: Rat

Application Route: inhalation (vapour)

Result: negative

deltamethrin (ISO):

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

Result: negative

Test Type: DNA Repair Test system: Escherichia coli

Result: negative

Test Type: Chromosomal aberration
Test system: Chinese hamster ovary cells

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster lung cells

Concentration: LOAEL: 20 mg/kg

Result: positive

Genotoxicity in vivo : Test Type: Micronucleus test

Species: Mouse Application Route: Oral Result: negative

Test Type: dominant lethal test

Species: Mouse Application Route: Oral Result: negative

Test Type: sister chromatid exchange assay

Species: Mouse

Cell type: Bone marrow Application Route: Oral

Result: negative

### Carcinogenicity

Not classified based on available information.

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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#### **Components:**

### Cyclohexanone:

Species : Mouse
Application Route : Ingestion
Exposure time : 104 weeks
Result : negative

### deltamethrin (ISO):

Species : Mouse, male and female

Application Route : oral (feed) Exposure time : 104 weeks

NOAEL : 8 mg/kg body weight LOAEL : 4 mg/kg body weight

Result : positive Target Organs : Lymph nodes

Species : Rat, male and female

Application Route : oral (feed)
Exposure time : 2 Years
Result : negative

Species : Dog, male and female

Application Route : oral (feed)
Exposure time : 2 Years

NOAEL : 1 mg/kg body weight

Result : negative

# Reproductive toxicity

Not classified based on available information.

### **Components:**

# Cyclohexanone:

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

Species: Rat

Application Route: inhalation (vapour)

Result: negative

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rabbit

Application Route: Ingestion Method: OECD Test Guideline 414

Result: negative

deltamethrin (ISO):

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

Species: Rat

Application Route: oral (feed)

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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Early Embryonic Development: NOAEL: 50 mg/kg body

weight

Symptoms: No effects on fertility, Embryo-foetal toxicity

Remarks: Significant toxicity observed in testing

Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Oral

Early Embryonic Development: LOAEL: 84 - 149 mg/kg body

weight

Symptoms: No effects on fertility, Embryo-foetal toxicity

Test Type: Fertility Species: Rat, male Application Route: Oral

Fertility: LOAEL: 1 mg/kg body weight

Symptoms: Effects on fertility

Target Organs: Testes

Effects on foetal develop-

nent

Test Type: Development

Species: Mouse

Application Route: oral (gavage)

Developmental Toxicity: LOAEL: 1 mg/kg body weight

Result: Skeletal malformations Remarks: Maternal toxicity observed.

Test Type: Development Species: Rat, female

Developmental Toxicity: NOAEL: 10 mg/kg body weight

Symptoms: No effects on foetal development

Test Type: Development Species: Rabbit, female

Application Route: oral (gavage)

Developmental Toxicity: NOAEL: 16 mg/kg body weight

Symptoms: No effects on foetal development

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on sexual function and

fertility, and/or on development, based on animal experiments.

### STOT - single exposure

Not classified based on available information.

### Components:

Cyclohexanone:

Assessment : May cause respiratory irritation.

deltamethrin (ISO):

Assessment : May cause respiratory irritation.

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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### STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

#### **Components:**

#### deltamethrin (ISO):

Exposure routes : Ingestion

Target Organs : Central nervous system, Immune system

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Central nervous system

Assessment : Causes damage to organs through prolonged or repeated

exposure.

### Repeated dose toxicity

### **Components:**

#### Soya oil:

Species : Rat

NOAEL : 4,000 mg/kg
Application Route : Ingestion
Exposure time : 90 h

# Cyclohexanone:

Species : Rat

NOAEL : 143 mg/kg

Application Route : Ingestion

Exposure time : 90 Days

Method : OECD Test Guideline 408

### deltamethrin (ISO):

Species : Rat, male and female

NOAEL : 1 mg/kg
LOAEL : 2.5 mg/kg
Application Route : Oral
Exposure time : 13 Weeks
Target Organs : Nervous system
Symptoms : hyperexcitability

Species : Rat LOAEL : 3 mg/m3

Application Route : inhalation (dust/mist/fume)
Exposure time : 2 wk / 5 d/wk / 6 h/d

Symptoms : Local irritation, respiratory tract irritation

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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Species: DogNOAEL: 0.1 mg/kgLOAEL: 1 mg/kgApplication Route: OralExposure time: 13 WeeksTarget Organs: Nervous system

Symptoms : Dilatation of the pupil, Vomiting, Tremors, Diarrhoea, Saliva-

tion

Species : Rat

NOAEL : 14 mg/kg

LOAEL : 54 mg/kg

Application Route : Oral

Exposure time : 91 d

Target Organs : Nervous system

Species : Mouse
LOAEL : 6 mg/kg
Application Route : Oral
Exposure time : 12 Weeks
Target Organs : Immune system
Symptoms : immune system effects

### **Aspiration toxicity**

Not classified based on available information.

### **Components:**

#### Cyclohexanone:

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

#### **Experience with human exposure**

#### **Components:**

### deltamethrin (ISO):

Inhalation : Symptoms: respiratory tract irritation, Dizziness, Sweating,

Headache, Nausea, Vomiting, anorexia, Fatigue, tingling,

Palpitation, Blurred vision, muscle twitching

Skin contact : Symptoms: Skin irritation, Erythema, pruritis, Headache, Nau-

sea, Vomiting, Dizziness, tingling, Sweating, muscle twitching,

Blurred vision, Fatigue, anorexia, Allergic reactions

Ingestion : Symptoms: muscle pain, Small pupils

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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#### 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### Components:

Cyclohexanone:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 527 - 732

mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

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

Exposure time: 24 h

Toxicity to algae/aquatic

plants

: EbC50 (Chlamydomonas reinhardtii (green algae)): 32.9 mg/l

Exposure time: 72 h

EC10 (Chlamydomonas reinhardtii (green algae)): 3.56 mg/l

Exposure time: 72 h

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

Exposure time: 30 min

Method: OECD Test Guideline 209

deltamethrin (ISO):

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): 0.00048

mg/l

Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): 0.00039 mg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Mysidopsis bahia (opossum shrimp)): 0.0037 μg/l

Exposure time: 48 h

EC50 (Daphnia magna (Water flea)): 0.0035 mg/l

Exposure time: 48 h

LC50 (Gammarus fasciatus (freshwater shrimp)): 0.0003 µg/l

Exposure time: 96 h

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): > 9.1

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: No toxicity at the limit of solubility

M-Factor (Acute aquatic tox- :

icity)

1,000,000

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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Toxicity to fish (Chronic tox-

icity)

NOEC (Pimephales promelas (fathead minnow)): 0.000022

mg/l

Exposure time: 36 d

NOEC (Pimephales promelas (fathead minnow)): 0.000017

mg/l

Exposure time: 260 d

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

M-Factor (Chronic aquatic

toxicity)

NOEC (Daphnia magna (Water flea)): 0.0041 µg/l

Exposure time: 21 d

1,000,000

# Persistence and degradability

#### **Components:**

Cyclohexanone:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 90 - 100 %

Exposure time: 28 d

Method: OECD Test Guideline 301F

deltamethrin (ISO):

Stability in water : Hydrolysis: 0 %(30 d)

**Bioaccumulative potential** 

**Components:** 

Soya oil:

Partition coefficient: n-

: log Pow: > 4

octanol/water

Remarks: Calculation

Cyclohexanone:

Partition coefficient: n-

octanol/water

log Pow: 0.86

deltamethrin (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 1,800

Partition coefficient: n-

octanol/water

log Pow: 4.6

Mobility in soil

**Components:** 

deltamethrin (ISO):

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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Distribution among environ-

mental compartments

log Koc: 7.2

#### Other adverse effects

No data available

#### 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.

If not otherwise specified: Dispose of as unused product.

#### 14. TRANSPORT INFORMATION

# International Regulations

**UNRTDG** 

**UN** number UN 3082

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(deltamethrin (ISO))

Class 9 Packing group Ш Labels 9 Environmentally hazardous yes

**IATA-DGR** 

UN/ID No. UN 3082

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

(deltamethrin (ISO))

9 Packing group Ш

Labels Miscellaneous

Packing instruction (cargo

aircraft)

Packing instruction (passen-964

ger aircraft)

Environmentally hazardous yes

**IMDG-Code** 

**UN** number UN 3082

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, Proper shipping name

N.O.S.

964

(deltamethrin (ISO))

Class 9 Ш Packing group Labels 9 **EmS Code** F-A, S-F

Marine pollutant yes

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

Version Revision Date: SDS Number: Date of last issue: 2024/07/06 5.0 2024/09/28 6328807-00011 Date of first issue: 2020/09/11

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

# **National Regulations**

GB 6944/12268

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(deltamethrin (ISO))

Class : 9
Packing group : III
Labels : 9
Marine pollutant : no

#### 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

#### **National regulatory information**

#### Law on the Prevention and Control of Occupational Diseases

#### **Regulations on Safety Management of Hazardous Chemicals**

Catalogue of Hazardous Chemicals : This product is not listed in the cata-

logue of hazardous chemicals, but it meets the definition of hazardous chemicals and its principles of de-

termination.

Identification of Major Hazard Installations for Hazardous Chemicals (GB : Not listed

18218)

Hazardous Chemicals for Priority Management under : Not listed

SAWS

# Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals : Not listed

# Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import : Not listed

and Export

#### Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals : Not listed

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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### **Yangtze River Protection Law**

This product does not contain any dangerous chemicals prohibited for inland river transport.

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

AICS : not determined

DSL : not determined

IECSC : not determined

#### 16. OTHER INFORMATION

Revision Date : 2024/09/28

**Further information** 

Sheet

Sources of key data used to compile the Safety Data

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 : yyyy/mm/dd

Full text of other abbreviations

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

CN OEL : Occupational exposure limits for hazardous agents in the

workplace - Chemical hazardous agents.

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

CN OEL / PC-TWA : Permissible concentration - time weighted average

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

according to GB/T 16483 and GB/T 17519



# **Deltamethrin (1%) Formulation**

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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

#### **Disclaimer**

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.

CN / EN