according to GB/T 16483 and GB/T 17519



# **Cypermethrin Liquid Formulation**

Version Revision Date: SDS Number: Date of last issue: 2024/06/26 2024/09/28 10849849-00010 Date of first issue: 2022/09/12 2.0

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Cypermethrin Liquid Formulation

VANQUISH LONG WOOL SPRAY-ON LICE TREATMENT Other means of identification

> AND BLOWFLY STRIKE PREVENTIVE FOR LONG WOOLLED SHEEP AND UNSHORN LAMBS (38354)

Vanquish (A005997)

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** suspension

Colour pink red

Odour No data available

May cause an allergic skin reaction. May cause cancer. Suspected of damaging fertility. Very toxic to aquatic life with long lasting effects.

**GHS Classification** 

Skin sensitisation Category 1

Carcinogenicity Category 1A

Category 2 Reproductive toxicity

Short-term (acute) aquatic

Category 1

hazard

according to GB/T 16483 and GB/T 17519



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Long-term (chronic) aquatic

hazard

Category 1

#### **GHS** label elements

Hazard pictograms







Signal word : Danger

Hazard statements : H317 May cause an allergic skin reaction.

H350 May cause cancer.

H361f Suspected of damaging fertility.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P261 Avoid breathing mist or vapours.

P272 Contaminated work clothing should not be allowed out of

the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

Response:

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

P308 + P313 IF exposed or concerned: Get medical advice/

attention.

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

vice/ attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

P391 Collect spillage.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste

disposal plant.

### Physical and chemical hazards

Not classified based on available information.

#### **Health hazards**

May cause an allergic skin reaction. May cause cancer. Suspected of damaging fertility.

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

None known.

#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Components

| Chemical name                                | CAS-No.    | Concentration (% w/w) |
|--|------------|-----------------------|
| Cypermethrin                                 | 52315-07-8 | >= 3 -< 10            |
| Oxirane, 2-methyl-, polymer with oxirane,    | 37251-69-7 | >= 1 -< 2.5           |
| mono(nonylphenyl) ether                      |            |                       |
| Polyoxyethylene Nonylphenyl Ether, Branched, | 68412-53-3 | >= 0.25 -< 1          |
| Phosphate                                    |            |                       |
| Formaldehyde                                 | 50-00-0    | >= 0.2 -< 0.25        |

#### 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 soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse. Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

May cause an allergic skin reaction.

Never give anything by mouth to an unconscious person.

Most important symptoms

In case of eye contact

and effects, both acute and

May cause cancer.

Commented of description

delayed Suspected of damaging fertility.
Protection of first-aiders : First Aid responders should pay

: 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**

Suitable extinguishing media : Water spray

Alcohol-resistant foam

according to GB/T 16483 and GB/T 17519



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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)

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

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

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

certain local or national requirements.

according to GB/T 16483 and GB/T 17519



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#### 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.

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 as-

sessment

Keep container tightly closed.

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 locked up. Keep tightly closed.

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<br>(Form of<br>exposure) | Control parameters / Permissible concentration | Basis    |  |
|--------------|---|-------------------------------------|--|----------|--|
| Cypermethrin | 52315-07-8  | TWA                                 | 50 μg/m3 (OEB 3)                               | Internal |  |
|              | Further information: DSEN, Skin                               |                                     |  |          |  |
|              |   | Wipe limit                          | 100 μg/100 cm2                                 | Internal |  |
| Formaldehyde | 50-00-0   | MAC                                 | 0.5 mg/m3                                      | CN OEL   |  |
|              | Further information: G1 - Carcinogenic to humans, Sensitizing |                                     |  |          |  |
|              |   | TWA                                 | 0.1 ppm  | ACGIH    |  |
|              |   | STEL                                | 0.3 ppm  | ACGIH    |  |

**Engineering measures**: Use appropriate engineering controls and manufacturing

technologies to control airborne concentrations (e.g., drip-

less quick connections).

All engineering controls should be implemented by facility

according to GB/T 16483 and GB/T 17519



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design and operated in accordance with GMP principles to

protect products, workers, and the environment.

Laboratory operations do not require special containment.

Personal protective equipment

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

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

Hand protection

Work uniform or laboratory coat.

Material Chemical-resistant gloves

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

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** suspension

Colour pink

red

Odour No data available

Odour Threshold No data available

3.0 - 6.0pΗ

Melting point/freezing point No data available

Initial boiling point and boiling : No data available

range

according to GB/T 16483 and GB/T 17519



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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

No data available Vapour pressure

No data available Relative vapour density

Relative density 1.02

Density No data available

Solubility(ies)

Water solubility 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.

Molecular weight No data available

Particle characteristics

Particle size Not applicable

# 10. STABILITY AND REACTIVITY

Reactivity Not classified as a reactivity hazard. Stable under normal conditions. Chemical stability Can react with strong oxidizing agents.

Possibility of hazardous reac-

tions

Conditions to avoid None known.

according to GB/T 16483 and GB/T 17519



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Incompatible materials

Hazardous decomposition

products

Oxidizing agents

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: > 30000 ppm

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

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

Method: Calculation method

**Components:** 

Cypermethrin:

Acute oral toxicity : LD50 (Rat, female): 367 mg/kg

LD50 (Rat, male): 891 mg/kg

Acute dermal toxicity : LD50 (Rat): > 4,800 mg/kg

LD50 (Rabbit): > 2,400 mg/kg

Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:

Acute oral toxicity : LD50 (Rat): > 4,000 mg/kg

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

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Acute oral toxicity : LD50 (Rat): 4,450 mg/kg

Method: OECD Test Guideline 401

Formaldehyde:

Acute oral toxicity : Acute toxicity estimate: 100 mg/kg

Method: Expert judgement

according to GB/T 16483 and GB/T 17519



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Remarks: Based on national or regional regulation.

Acute inhalation toxicity : Acute toxicity estimate (Rat): 100 ppm

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

Acute dermal toxicity : LD50 (Rabbit): 270 mg/kg

#### Skin corrosion/irritation

Not classified based on available information.

#### **Components:**

#### Cypermethrin:

Species : Rabbit
Method : Draize Test
Result : No skin irritation

### Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Species : Rabbit Result : Skin irritation

#### Formaldehyde:

Result : Corrosive after 3 minutes to 1 hour of exposure Remarks : Based on national or regional regulation.

#### Serious eye damage/eye irritation

Not classified based on available information.

# **Components:**

#### Cypermethrin:

Species : Rabbit

Result : No eye irritation Method : Draize Test

#### Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Species : Rabbit

Result : Irreversible effects on the eye

Method : Draize Test

#### Formaldehyde:

Result : Irreversible effects on the eye Remarks : Based on skin corrosivity.

according to GB/T 16483 and GB/T 17519



# **Cypermethrin Liquid Formulation**

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#### Respiratory or skin sensitisation

#### Skin sensitisation

May cause an allergic skin reaction.

#### Respiratory sensitisation

Not classified based on available information.

### **Components:**

#### Cypermethrin:

Test Type : Magnusson-Kligman-Test

Species : Guinea pig

Assessment : Did not cause sensitisation on laboratory animals.

Result : Not a skin sensitizer.

### Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Exposure routes : Skin contact
Species : Humans
Result : negative

### Formaldehyde:

Test Type : Human repeat insult patch test (HRIPT)

Exposure routes : Skin contact
Species : Humans
Result : positive

Assessment : Probability or evidence of high skin sensitisation rate in hu-

mans

#### Germ cell mutagenicity

Not classified based on available information.

#### **Components:**

#### Cypermethrin:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro

Test system: Human lymphocytes

Result: negative

Test Type: Microbial mutagenesis assay (Ames test)

Result: negative

Test Type: sister chromatid exchange assay

Test system: Human lymphocytes

Result: negative

Genotoxicity in vivo : Test Type: In vivo micronucleus test

Species: Rat

Application Route: Oral

according to GB/T 16483 and GB/T 17519



# **Cypermethrin Liquid Formulation**

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Result: positive

Test Type: In vivo micronucleus test

Species: Rat

**Application Route: Dermal** 

Result: positive

Test Type: In vivo micronucleus test

Species: Rat

Application Route: Intraperitoneal injection

Result: negative

Germ cell mutagenicity -

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

Formaldehyde:

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

Result: positive

Test Type: In vitro mammalian cell gene mutation test

Result: positive

Test Type: Chromosome aberration test in vitro

Result: positive

Genotoxicity in vivo : Test Type: In vivo mammalian alkaline comet assay

Species: Mouse

**Application Route: Inhalation** 

Result: positive

Germ cell mutagenicity -

Assessment

Positive result(s) from in vivo mammalian somatic cell muta-

genicity tests.

Remarks: Based on national or regional regulation.

Carcinogenicity

May cause cancer.

Components:

Formaldehyde:

Species : Rat

Application Route : inhalation (gas)
Exposure time : 28 Months
Result : positive

Carcinogenicity - Assess-

ment

Positive evidence from human epidemiological studies

Remarks: Based on national or regional regulation.

Reproductive toxicity

Suspected of damaging fertility.

according to GB/T 16483 and GB/T 17519



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#### **Components:**

# Cypermethrin:

Effects on fertility Test Type: Fertility

Species: Rat, male Application Route: Oral

Fertility: LOAEL: 68 mg/kg body weight

Symptoms: Effects on fertility, male reproductive effects, Tes-

ticular effects

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

Fertility: NOAEL: 6.25 mg/kg body weight

Target Organs: male reproductive organs, Testis

Effects on foetal develop-

ment

Test Type: Three-generation reproduction toxicity study

Species: Mouse

Application Route: Oral

General Toxicity Maternal: NOAEL: 5 mg/kg body weight Symptoms: No effects on foetal development, No effect on

reproduction capacity, Reduced body weight

Test Type: Reproduction/Developmental toxicity screening

test

Species: Rabbit

Application Route: Oral

Teratogenicity: NOAEL: 30 mg/kg body weight Symptoms: No effects on foetal development

Test Type: Reproduction/Developmental toxicity screening

test

Species: Rat

Application Route: Oral

Teratogenicity: NOAEL: 17.5 mg/kg body weight Symptoms: No effects on foetal development

Reproductive toxicity - As-

sessment

Some evidence of adverse effects on sexual function and

fertility, based on animal experiments.

#### Formaldehyde:

Effects on foetal develop-

ment

Test Type: Embryo-foetal development

Species: Rat

Application Route: inhalation (gas)

Result: negative

### STOT - single exposure

Not classified based on available information.

according to GB/T 16483 and GB/T 17519



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**Components:** 

Cypermethrin:

Target Organs : Nervous system

Assessment : May cause damage to organs.

Formaldehyde:

Assessment : May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

**Components:** 

Cypermethrin:

Species : Rat

NOAEL : 5 mg/kg

Application Route : Oral

Exposure time : 3 Months

Target Organs : Central nervous system

Species : Rabbit

NOAEL : 12.5 mg/kg

Application Route : Oral

Exposure time : 3 Months

Target Organs : Central nervous system

Species : Dog
NOAEL : 1 mg/kg
Application Route : Oral
Exposure time : 1 yr

Symptoms : anxiety, central nervous system effects

Species: RabbitNOAEL: 20 mg/kgApplication Route: DermalExposure time: 3 Weeks

Target Organs : male reproductive organs

Symptoms : reduced body weight gain, reduced food consumption

**Aspiration toxicity** 

Not classified based on available information.

**Experience with human exposure** 

**Components:** 

Cypermethrin:

according to GB/T 16483 and GB/T 17519



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General Information : Target Organs: Nervous system

Symptoms: muscle weakness, central nervous system effects

Remarks: Based on Human Evidence The most common side effects are:

Remarks: paraesthesias

**Further information** 

**Components:** 

Cypermethrin:

Remarks : Dermal absorption possible

#### 12. ECOLOGICAL INFORMATION

#### **Ecotoxicity**

#### **Components:**

Cypermethrin:

Toxicity to fish : EC50 (Oncorhynchus mykiss (rainbow trout)): 0.39 μg/l

Exposure time: 96 h

EC50 (Cyprinodon variegatus (sheepshead minnow)): 0.95

μg/l

Exposure time: 96 h

Toxicity to daphnia and other:

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.0036 µg/l

Exposure time: 48 h

EC50 (Americamysis): 0.00475 µg/l

Exposure time: 48 h

M-Factor (Acute aquatic tox- :

city

100,000

Toxicity to fish (Chronic tox-

city)

NOEC (Pimephales promelas (fathead minnow)): 0.14 µg/l

Exposure time: 30 d

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

NOEC (Mysidopsis bahia (opossum shrimp)): 0.000781 µg/l

Exposure time: 28 d

M-Factor (Chronic aquatic

toxicity)

100,000

#### Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:

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

according to GB/T 16483 and GB/T 17519



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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 tox- : 1

Toxicity to fish (Chronic tox-

icity)

NOEC (Oryzias latipes (Japanese medaka)): > 0.1 - 1 mg/l

Exposure time: 100 d

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Mysidopsis bahia (opossum shrimp)): > 0.001 - 0.01

mg/l

Exposure time: 28 d

Remarks: Based on data from similar materials

M-Factor (Chronic aquatic

toxicity)

10

EC10 (activated sludge): > 1 mg/l Toxicity to microorganisms

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Based on data from similar materials

#### Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

LC50 (Pimephales promelas (fathead minnow)): > 0.1 - 1 mg/l Toxicity to fish

Exposure time: 96 h

Remarks: Based on data from similar materials

aquatic invertebrates

Toxicity to daphnia and other : 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

according to GB/T 16483 and GB/T 17519



# **Cypermethrin Liquid Formulation**

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Exposure time: 72 h

Method: OECD Test Guideline 201

Remarks: Based on data from similar materials

M-Factor (Acute aquatic tox- :

icity)

Toxicity to fish (Chronic tox-

icity)

NOEC (Oryzias latipes (Japanese medaka)): > 0.1 - 1 mg/l

Exposure time: 100 d

Remarks: Based on data from similar materials

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Mysidopsis bahia (opossum shrimp)): > 0.001 - 0.01

mg/l

10

Exposure time: 28 d

Remarks: Based on data from similar materials

M-Factor (Chronic aquatic

toxicity)

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

Formaldehyde:

Toxicity to fish : LC50 (Morone saxatilis (striped bass)): 6.7 mg/l

Exposure time: 96 h

Toxicity to daphnia and other:

aquatic invertebrates

EC50 (Daphnia pulex (Water flea)): 5.8 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

ErC50 (Desmodesmus subspicatus (green algae)): 4.89 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 1.04 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Toxicity to microorganisms : EC50 (activated sludge): 19 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Persistence and degradability

Components:

Cypermethrin:

Stability in water : Degradation half life (DT50): 17 d

Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:

Biodegradability : Result: Not readily biodegradable.

according to GB/T 16483 and GB/T 17519



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Remarks: Based on data from similar materials

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Biodegradability : Result: Not readily biodegradable.

Remarks: Based on data from similar materials

Formaldehyde:

Biodegradability Result: Readily biodegradable.

Biodegradation: 99 % Exposure time: 28 d

Method: OECD Test Guideline 301A

Bioaccumulative potential

**Components:** 

Cypermethrin:

Bioaccumulation : Bioconcentration factor (BCF): 488

Partition coefficient: n-: log Pow: 6.6

octanol/water

Oxirane, 2-methyl-, polymer with oxirane, mono(nonylphenyl) ether:

: log Pow: < 4 Partition coefficient: n-

octanol/water Remarks: Calculation

Polyoxyethylene Nonylphenyl Ether, Branched, Phosphate:

Partition coefficient: n-: log Pow: > 4

octanol/water Remarks: Expert judgement

Formaldehyde:

Partition coefficient: n-: log Pow: 0.35

octanol/water Remarks: Calculation

Mobility in soil

**Components:** 

Cypermethrin:

Distribution among environ- : log Koc: 5.58

mental compartments

Stability in soil

Other adverse effects

No data available

according to GB/T 16483 and GB/T 17519



# **Cypermethrin Liquid Formulation**

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#### 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.

(Cypermethrin)

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.

(Cypermethrin)

Class : 9 Packing group : III

Labels : Miscellaneous

Packing instruction (cargo

aircraft)

Packing instruction (passen- : 964

ger aircraft)

Environmentally hazardous : yes

IMDG-Code

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

964

(Cypermethrin)

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

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

Not applicable for product as supplied.

### **National Regulations**

according to GB/T 16483 and GB/T 17519



# **Cypermethrin Liquid Formulation**

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GB 6944/12268

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Cypermethrin)

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

#### **Yangtze River Protection Law**

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

according to GB/T 16483 and GB/T 17519



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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** 

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 yyyy/mm/dd

Full text of other abbreviations

**ACGIH** USA. ACGIH Threshold Limit Values (TLV)

Occupational exposure limits for hazardous agents in the **CN OEL** 

workplace - Chemical hazardous agents.

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

Maximum allowable concentration CN OEL / MAC

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, Bioaccumu-

according to GB/T 16483 and GB/T 17519



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lative 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