

## **Cypermethrin Formulation**

 Version
 Revision Date:
 SDS Number:
 Date of last issue: 02.03.2023

 1.10
 30.09.2023
 6116907-00011
 Date of first issue: 15.07.2020

#### **SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Cypermethrin Formulation

Manufacturer or supplier's details

Company name of supplier : MSD

Address : 126 E. Lincoln Avenue

Rahway, New Jersey U.S.A. 07065

Telephone : 908-740-4000 Emergency telephone : 1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product Restrictions on use : Not applicable

#### **SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification** 

Reproductive toxicity : Category 2

Specific target organ toxicity

- single exposure

Category 2 (Nervous system)

**GHS** label elements

Hazard pictograms



Signal Word : Warning

Hazard Statements : H361f Suspected of damaging fertility.

H371 May cause damage to organs (Nervous system).

Precautionary Statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P260 Do not breathe mist or vapors. P264 Wash skin thoroughly after handling.

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

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P308 + P311 IF exposed or concerned: Call a POISON

CENTER/ doctor.

Storage:

P405 Store locked up.



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Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS** 

Substance / Mixture : Mixture

Components

Chemical nameCAS-No.Concentration (% w/w)Cypermethrin52315-07-8>= 5 -< 10</td>

**SECTION 4. FIRST AID MEASURES** 

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

advice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

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

Never give anything by mouth to an unconscious person.

Most important symptoms

In case of eye contact

and effects, both acute and

Protection of first-aiders

delayed

Suspected of damaging fertility. May cause damage to organs.

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.

**SECTION 5. FIRE-FIGHTING MEASURES** 

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

: None known.

Specific hazards during fire : Exposure to combustion products may be a hazard to health.



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fighting

Hazardous combustion prod-

Carbon oxides

Nitrogen oxides (NOx)

Specific extinguishing meth-

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 fire-fighters

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

Use personal protective equipment.

#### **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protec- :

tive equipment and emer-

gency procedures

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g., by containment or

oil barriers).

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for

containment and cleaning up

Soak up with inert absorbent material.

For large spills, provide diking or other appropriate

containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate

Clean up remaining materials from spill with suitable

absorbent.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items

employed in the cleanup of releases. You will need to

determine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### **SECTION 7. HANDLING AND STORAGE**

Technical measures See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation Advice on safe handling Use only with adequate ventilation. Do not breathe mist or vapors.

Do not swallow.

Avoid contact with eyes.

Avoid prolonged or repeated contact with skin.

Wash skin thoroughly after handling.

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

assessment



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

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

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 : Keep in properly labeled containers.

Store locked up.

Store in accordance with the particular national regulations.

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

Strong oxidizing agents

Gases

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### Ingredients with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
Cypermethrin	52315-07-8	TWA	50 μg/m3 (OEB 3)	Internal
	Further information: DSEN, Skin			
		Wipe limit	100 μg/100 cm2	Internal

**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 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

exposure assessment demonstrates exposures outside the

recommended guidelines, use respiratory protection.

Filter type Hand protection Combined particulates and organic vapor type

Material : Chemical-resistant gloves

Eye 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 and body protection : Work uniform or laboratory coat.



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#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Color : yellow

Odor : characteristic

Odor Threshold : No data available

pH : No data available

Melting point/freezing point : -30 °C

Initial boiling point and boiling

range

210 °C

Flash point : 208 °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

Vapor pressure : No data available

Relative vapor density : No data available

Relative density : 0.92 - 0.94

Density : No data available

Solubility(ies)

Water solubility : insoluble

Partition coefficient: n-

octanol/water

: Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

Explosive properties : Not explosive



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Oxidizing properties The substance or mixture is not classified as oxidizing.

Molecular weight No data available

Particle size Not applicable

#### **SECTION 10. STABILITY AND REACTIVITY**

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

Possibility of hazardous reac-

Conditions to avoid None known. Incompatible materials Oxidizing agents

Hazardous decomposition

products

No hazardous decomposition products are known.

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

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

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

#### Skin corrosion/irritation

Not classified based on available information.

#### **Components:**

### Cypermethrin:



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

#### Serious eye damage/eye irritation

Not classified based on available information.

#### Components:

Cypermethrin:

Species : Rabbit

Result : No eye irritation Method : Draize Test

### Respiratory or skin sensitization

#### Skin sensitization

Not classified based on available information.

### Respiratory sensitization

Not classified based on available information.

#### **Components:**

### Cypermethrin:

Test Type : Magnusson-Kligman-Test

Species : Guinea pig

Assessment : Did not cause sensitization on laboratory animals.

Result : Not a skin sensitizer.

#### 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

Result: positive

Test Type: In vivo micronucleus test

Species: Rat



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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.

#### Carcinogenicity

Not classified based on available information.

### Reproductive toxicity

Suspected of damaging fertility.

#### **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 fetal development : 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 fetal 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 fetal 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 fetal development.

Reproductive toxicity - As- : Some evidence of adverse effects on sexual function and



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sessment fertility, based on animal experiments.

#### STOT-single exposure

May cause damage to organs (Nervous system).

### **Components:**

### Cypermethrin:

Target Organs : Nervous system

Assessment : May cause damage to organs.

#### 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 y

Symptoms : anxiety, central nervous system effects

Species : Rabbit
NOAEL : 20 mg/kg
Application Route : Dermal
Exposure 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:

General Information : Target Organs: Nervous system

Symptoms: muscle weakness, central nervous system effects



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

Remarks: paraesthesias

**Further information** 

**Components:** 

Cypermethrin:

Remarks : Dermal absorption possible

#### **SECTION 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

Toxicity to fish (Chronic tox-

icity)

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

Persistence and degradability

Components:

Cypermethrin:

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

**Bioaccumulative potential** 

**Components:** 

Cypermethrin:

Bioaccumulation : Bioconcentration factor (BCF): 488

Partition coefficient: n-

octanol/water

log Pow: 6.6



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log Koc: 5.58

Mobility in soil

**Components:** 

Cypermethrin:

Distribution among environ-

mental compartments

Stability in soil

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

handling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

**SECTION 14. TRANSPORT INFORMATION** 

**International Regulations** 

**UNRTDG** 

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Cypermethrin)

Class : 9
Packing group : III
Labels : 9
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 : 964

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.

(Cypermethrin)

Class : 9
Packing group : III
Labels : 9



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EmS Code : F-A, S-F Marine pollutant : yes

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

Not applicable for product as supplied.

#### **Domestic regulation**

NOM-002-SCT

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Cypermethrin)

Class : 9
Packing group : III
Labels : 9

#### 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/legislation specific for the substance or mixture

Federal Law for the control of chemical precursors, essential chemical products and machinery for producing capsules, tablets and pills.

Not applicable

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

AICS : not determined

DSL : not determined

IECSC : not determined

#### **SECTION 16. OTHER INFORMATION**

Revision Date : 30.09.2023 Date format : dd.mm.yyyy

#### Full text of other abbreviations

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



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- 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

Sources of key data used to compile the Material Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

MX / Z8