

## Chemical Safety Data Sheet MSDS / SDS

## Bifenthrin

Revision Date:2026-05-31 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : Bifenthrin  
CBnumber : CB1714667  
CAS : 82657-04-3  
EINECS Number : 200-258-5  
Synonyms : Bifenthrin,2-METHYLBIPHENYL-3-YLMETHYL-(Z)-(1RS)-CIS-3-(2-CHLORO-3,3,3-TRIFLUOROPROP-1-EN

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P302+P352 IF ON SKIN: wash with plenty of soap and water.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P273 Avoid release to the environment.  
P201 Obtain special instructions before use.

## Hazard statements

H410 Very toxic to aquatic life with long lasting effects  
H372 Causes damage to organs through prolonged or repeated exposure  
H351 Suspected of causing cancer  
H331 Toxic if inhaled

H317 May cause an allergic skin reaction

H300 Fatal if swallowed

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## SECTION 3: Composition/information on ingredients

### Substance

Product name	: Bifenthrin
Synonyms	: Bifenthrin,2-METHYLBIPHENYL-3-YLMETHYL-(Z)-(1RS)-CIS-3-(2-CHLORO-3,3,3-TRIFLUOROPROP-1-EN
CAS	: 82657-04-3
EC number	: 200-258-5
MF	: C23H22ClF3O2
MW	: 422.87

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## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration.

Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### 4.3 Indication of any immediate medical attention and special treatment needed

No data available

### 4.4 Notes to physician

No data available

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

### Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

## 5.2 Special hazards arising from the substance or mixture

Carbon oxides

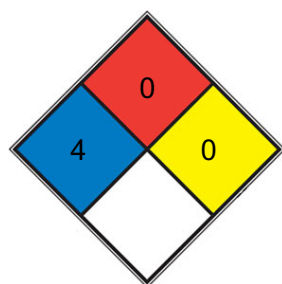
Hydrogen chloride gas

Hydrogen fluoride

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### NFPA 704



**HEALTH 4** Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, [hydrofluoric acid](#))

**FIRE 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

**REACT 0** Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium,[N2](#))

**SPEC.**  
**HAZ.**

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### 6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

### 6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

#### Advice on protection against fire and explosion

Provide appropriate exhaust ventilation at places where dust is formed.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

For precautions see section 2.2.

### 7.2 Conditions for safe storage, including any incompatibilities

#### Storage conditions

Keep container tightly closed in a dry and well-ventilated place.

#### Storage stability

Recommended storage temperature 2 - 8 °C

#### Storage class

Storage class (TRGS 510): 6.1A: Combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

##### Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

##### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

a) Physical state	powder
b) Color	white
c) Odor	No data available
d) Melting point/freezing point	69 °C
e) Initial boiling point and boiling range	453.2±45.0 °C(Predicted)
f) Flammability (solid, gas)	No data available
g) Upper/lower flammability or explosive limits	No data available
h) Flash point	165 °C
i) Autoignition temperature	No data available
j) Decomposition temperature	No data available
k) pH	No data available
l) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
m) Water solubility	at 20 °C slightly soluble
n) Partition coefficient n-octanol/water	log Pow: > 6
o) Vapor pressure	< 1 hPa at 25 °C
p) Density	1.212 g/cm <sup>3</sup> at 25 °C
Relative density	d <sub>25</sub> 1.212 g/ml
q) Relative vapor density	No data available
r) Particle characteristics	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none
Solubility	DMSO: 100 mg/mL (236.48 mM)

### 9.2 Other safety information

#### Bulk density

1.212 g/l at 20 °C

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## SECTION 10: Stability and reactivity

### **10.1 Chemical stability**

Stable under recommended storage conditions.

### **10.2 Possibility of hazardous reactions**

No data available

### **10.3 Conditions to avoid**

No data available

### **10.4 Incompatible materials**

Strong oxidizing agents

### **10.5 Hazardous decomposition products**

In the event of fire: see section 5

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## **SECTION 11: Toxicological information**

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

LD50 Oral - Mouse - 42.5 mg/kg

LC50 Inhalation - Rat - 4 h - 0.8 mg/l - dust/mist

Dermal: No data available

#### **Skin corrosion/irritation**

Classified based on available data. For more details, see section 2

#### **Serious eye damage/eye irritation**

Classified based on available data. For more details, see section 2

#### **Respiratory or skin sensitization**

Maximization Test - Guinea pig

Result: Causes sensitization.

(OECD Test Guideline 406)

#### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

#### **Carcinogenicity**

Suspected human carcinogens

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - repeated exposure**

Causes damage to organs through prolonged or repeated exposure. - Nervous system

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2

## 11.2 Additional Information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

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## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish mortality LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0.1 µg/l - 96 h

### 12.2 Persistence and degradability

No data available

### 12.3 Bioaccumulative potential

No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Endocrine disrupting properties

No data available

### 12.7 Other adverse effects

Very toxic to aquatic life with long lasting effects.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

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## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2811

IMDG: 2811

IATA-DGR: 2811

## 14.2 UN proper shipping name

ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (Bifenthrin)

IMDG: TOXIC SOLID, ORGANIC, N.O.S. (Bifenthrin)

IATA-DGR: Toxic solid, organic, n.o.s. (Bifenthrin)

Passenger Aircraft: Not permitted for transport

Cargo Aircraft: Not permitted for transport

## 14.3 Transport hazard class(es)

ADR/RID: 6.1

IMDG: 6.1

IATA-DGR: 6.1

## 14.4 Packaging group

ADR/RID: II

IMDG: II

IATA-DGR: II

## 14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA-DGR: no

## 14.6 Special precautions for user

Based on chemical properties, choose appropriate tools and conditions of transport.

Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

## 14.7 Incompatible materials

Strong oxidizing agents

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# SECTION 15: Regulatory information

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

National regulatory information

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

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# SECTION 16: Other information

## Abbreviations and acronyms

CAS: Chemical Abstracts Service

TWA: Time-Weighted Average

STEL: Short-Term Exposure Limit

LD50: Lethal Dose 50%

LC50: Lethal Concentration 50%

EC50: Effective Concentration 50%

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

IMDG: International Maritime Dangerous Goods Code

IATA: International Air Transport Association

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

DOT: US Department of Transportation

NFPA: National Fire Protection Association

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health Administration

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.