

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers

Product name : Cyhalothrin solution

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

Identified uses : Laboratory chemicals, Manufacture of substances

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Highly flammable. Harmful by inhalation, in contact with skin and if swallowed. Irritating to eyes. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.2 Label elements

According to European Directive 67/548/EEC as amended.

Hazard symbol(s)



R-phrase(s)

R11 Highly flammable.
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
R36 Irritating to eyes.
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrase(s)

S16 Keep away from sources of ignition - No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37 Wear suitable protective clothing and gloves.
S61 Avoid release to the environment. Refer to special instructions/ Safety data sheets.

2.3 Other hazards - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Component	Classification	Concentration
-----------	----------------	---------------

Acetonitrile

CAS-No.	75-05-8	Flam. Liq. 2; Acute Tox. 4; Eye > 99,9 %
EC-No.	200-835-2	Irrit. 2, H225, H319, H302, H312, H332
	-	F, Xn, R11 - R20/21/22 - R36

α -Cyano-3-phenoxybenzyl 3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropane carboxylate

CAS-No.	68085-85-8	Acute Tox. 1; Acute Tox. 3; Skin Irrit. 2; Eye Irrit. 2; Skin Sens. 1; Aquatic Acute 1; Aquatic Chronic 1; H301, H315, H317, H319, H330, H410	< 0,001 %
EC-No.	268-450-2	T+; N, R25 - R26 - R36/38 - R43 - R50/53 - R57	

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

4.1 Description of first aid measures

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

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.

4.2 Most important symptoms and effects, both acute and delayed

Treat as cyanide poisoning. Always have on hand a cyanide first-aid kit, together with proper instructions. The onset of symptoms is generally delayed pending conversion to cyanide. Headache, Dizziness, Rash, Cyanosis, excitement, depression, Drowsiness

4.3 Indication of any immediate medical attention and special treatment needed

no data available

5. FIRE-FIGHTING 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

no data available

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: 2 - 8 °C

Handle and store under inert gas.

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

General industrial hygiene practice.

Personal protective equipment

Eye/face protection

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 EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection not required. For nuisance exposures use type OV/AG (US) or type ABEK (EU EN 14387) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form: liquid

b) Odour no data available

c) Odour Threshold no data available

d) pH no data available

e) Melting point/freezing point no data available

f) Initial boiling point and boiling range 81 - 82 °C at 1.013 hPa

g) Flash point 2 °C

h) Evaporation rate no data available

i) Flammability (solid, gas) no data available

j) Upper/lower flammability or explosive limits Upper explosion limit: 16 % (V)
Lower explosion limit: 3 % (V)

k) Vapour pressure no data available

l) Vapour density no data available

m) Relative density 0,780 g/cm3 at 50 °C

n) Water solubility no data available

o) Partition coefficient: n-octanol/water no data available

p) Autoignition temperature 525 °C

q) Decomposition temperature no data available

r) Viscosity no data available

s) Explosive properties no data available

t) Oxidizing properties no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

no data available

10.2 Chemical stability

no data available

10.3 Possibility of hazardous reactions

no data available

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

Bases, Oxidizing agents, Alkaline metals, Reducing agents, acids

10.6 Hazardous decomposition products

no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity/skin irritation

no data available

Acute toxicity/eye irritation

no data available

Respiratory or skin sensitization

no data available

General cell mutagenicity

no data available

Carcinogenicity

no data available

IARC: No component of this product present at levels greater than or equal to 0,1% is identified as probable, possible or confirmed human carcinogen by IARC.

WHO: No component of this product present at levels greater than or equal to 0,1% is identified as

EU: No component of this product present at levels greater than or equal to 0,1% is identified as

OSHA: No component of this product present at levels greater than or equal to 0,1% is identified as

NIOSH: No component of this product present at levels greater than or equal to 0,1% is identified as

NIH: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as

ICR: No component of this product present at levels greater than or equal to 0,1% is identified as