



## MATERIAL SAFETY DATA SHEET

### Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO.,LTD

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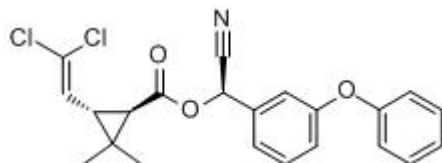
### 1. Chemical Product Identification

Product Name: Cypermethrin 93% TC

Molecular Formula:  $C_{22}H_{19}Cl_2NO_3$

Molecular Weight: 416.3 g/mol

Structural Formula:



Chemical Name: (RS)- $\alpha$ -cyano-3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate

Form: liquid or crystalline semisolid

Colour: Yellow-brown

Odour: Characteristic odor

CAS No.: 52315-07-8

### 2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Cypermethrin	52315-07-8	$\geq 93.0$
Others ingredients		$\leq 7.0$

### 3. Hazards Identification



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Symptoms of Acute Exposure: An extremely severe irritant to eyes. May cause skin irritation and contact dermatitis. Allergic skin reactions are possible.

Hazardous Decomposition Products: Can decompose at high temperatures forming toxic gases.

Unusual Fire, Explosion and Reactivity Hazards: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

#### 4. First Aid Measures

Skin: Remove contaminated clothes. Rinse and then wash skin with plenty of water immediately.

Eyes: Rinse with plenty of water for several minutes (remove contact lenses if easily possible) immediately.

Ingestion: If swallowed induce vomiting by tickling the back of throat. Be quiet and call a physician

Notes to physician: No specific antidote if ingested. Treat symptomatically.

#### 5. Fire-Fighting Measures

Extinguishing media

To be used: Powder, water spray, foam, carbon dioxide.

Don't use: Not applicable

Particular risk: None

Measures of personal protection: Safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

#### 6. Accidental Release Measures

Personal cautions: Safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

Cleaning methods: The empty container may be decontaminated by rinsing two or three times with water and detergent and scrubbing the sides.

Environmental cautions: Prevent the contamination of the floor and the beds of water.

#### 7. Handling and Storage

Handling: Do not apply to humans, their clothing, or bedding. Do not contaminate food or



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use on household tanks.

Storage: Store at normal temperatures, away from children, domestic animals, food and feed products, seed and fertilizer. Do not contaminate other stored products or the storage area by handling or storage of this product. Keep in a well-ventilated room.

## 8. Exposure Controls / Personal Protection

Personal protective equipment

Respiratory protection: Approved respirator

Protective gloves: Rubber gloves

Eye protection: Safety goggles or face shield.

Industrial hygiene: adequate ventilation.

## 9. Physical And Chemical Properties

Appearance: Yellow-brown liquid or crystalline semisolid;

Melting point: 60-80°C;

Density: 1.24g/cm<sup>3</sup>(20°C);

Water solubility: 0.01mg/L at 20°C;

Other solubility: xylene >450, ethanol 337, hexane 103 (all in g/l, 20 °C).

PH value: 4.0~7.0;

Flash point: >300°C;

Octanol/water partition coefficient: Kow log P= 6.60(25°C);

## 10. Stability And Reactivity

Stability: Thermally stable at ambient temperatures. Stable to U.V. light in aqueous media and in crystalline state. Stable in acidic and moderately alkaline aqueous solution; slow hydrolysis at pH>9.

Incompatibility (Materials to Avoid): Cypermethrin can not be mixed with lime sulfur, Bordeaux mixture and some other alkaline pesticides.

Hazardous reaction: The substance decomposes on heating and on burning, producing toxic and corrosive fumes including hydrogen chloride and nitrogen oxides.

## 11. Toxicological Information

Acute oral LD<sub>50</sub> : 250-500 mg/kg (rat)



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Acute dermal LD<sub>50</sub>: 1600 mg/kg (rat); 2000mg/kg (rabbit)

Acute inhalation LC<sub>50</sub> (4 hour) :2.5 mg/L (rat)

Contact with the skin: Moderate irritation (rabbit);

Contact with the eyes: Slight irritation (rabbit).

## 12. Ecological And Ecotoxicological Information

Effect on birds: low toxicity to birds, acute oral LD<sub>50</sub> for Mallard ducks >9520 mg/kg.

Effect on fish: high toxicity to fish, acute 96 hour LC<sub>50</sub> for Rainbow trout is 0.00151 mg/L.

Effect on aquatic invertebrates: high toxicity to aquatic invertebrates, acute 48 hour EC<sub>50</sub> for Daphnia magna is 0.00021 mg/L.

Effect on algae: moderate toxicity to algae, acute 72 hour EC<sub>50</sub> for Pseudokirchneriella subcapitata is >0.0667 mg/L.

Effect on honeybees: high toxicity to honeybees, contact acute 48 hour LD<sub>50</sub> is 0.023 µg/bee;  
Oral acute 48 hour LD<sub>50</sub> is 0.172 µg/bee.

Effect on earthworms: moderate toxicity to earthworms, acute 14 day LC<sub>50</sub> for Eisenia foetida is >100 mg/kg.

## 13. Disposal Considerations

Disposal must be in accordance with applicable local regulations. Remove nonusable solid materials and/or contaminated soil for disposal in an approved and permitted landfill. Do not flush into surface water or sanitary sewer systems.

Spillage disposal: Do not wash away into sewer. Do not let this chemical enter the environment. Sweep spilled substance into containers; if appropriate, moisten first to prevent dusting. Carefully collect remainder, then remove to safe place.

## 14. Transport Information

Not applicable

## 15. Regulatory Information

Not applicable

## 16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are



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based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.