



## MATERIAL SAFETY DATA SHEET

### Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO., LTD

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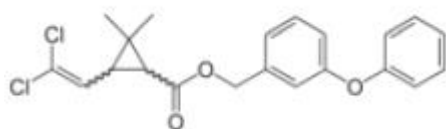
### 1. Chemical Product Identification

Product Name: Permethrin 95% TC

Molecular Formula:  $C_{21}H_{20}Cl_2O_3$

Molecular Weight: 391.29 g/mol

Structural Formula:



Chemical Name: 3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2 -dimethyl  
cyclopropanecarboxylate

Physical state: Liquid

Color: Yellow

Odor: Odorless

CAS No: 52645-53-1

### 2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Permethrin	52645-53-1	95.0
Other ingredients		5.0

### 3. Hazards Identification



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Note: Please refer to Section 11 for detailed toxicological information.

Emergency Overview: Medium amber to light brown liquid with a very mild odor that: Causes skin irritation and moderate eye injury. The product is highly toxic to fish and bees.

Routes of Exposure: Inhalation, eye and skin contact.

Immediate Effects:

Eye: Causes moderate eye injury.

Skin: Causes skin irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals

## 4. First Aid Measures

Skin: wash with plenty of soap and water.

Eyes: flush with plenty of water for 15 minutes.

Inhalation: remove person to fresh air. Apply artificial respiration if indicated. Get medical attention.

Ingestion: Drink promptly a large quantity of skimmed milk, egg whites or gelatin solution, or if these are not available, large quantities of water. This product contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Not to Physician: Do not administer or instill milk, cream or other substances containing vegetable or animal fats, which enhance absorption of lipophilic substances.

## 5. Fire-Fighting Measures

Fire and explosion hazards: Do not use or store near heat or open flame. Do not use this product in or on electrical equipment due to the possibility of shock hazard.

Suitable extinguishing media: Carbon dioxide, dry chemical, foam or water.

Fire fighting instructions: As in any fire, wear self-contained breathing apparatus pressure-demand.

## 6. Accidental Release Measures

General and Disposal: Soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

## 7. Handling And Storage



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Handling Procedures: Do not get on skin or on clothing. Avoid breathing vapor or spray mist and contact with eyes. Do not use near heat or open flame. Do not use this product in or on electrical equipment.

Storing Procedures: Do not contaminate water, food or feed by storage. Store upright at room temperature. Avoid exposure to extreme temperatures, Do not store near heat or open flame.

Work/Hygienic Procedures: Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

## 8. Exposure Controls / Personal Protection

Body Protection: Impervious gloves

Respiratory protection: Wear full-faced gas mask with canister type recommended for general insecticide protection for applying indoors as a space spray or fog.

Protective gloves: Safety glasses or goggles.

Eye protection: Safety glasses; chemical goggles.

Exposure Limits: None established.

## 9. Physical And Chemical Properties

Physical state: Liquid

Color: Yellow

Odor: Odorless

Melting point: 34-35°C

Boiling point: 200°C

Specific gravity: 1.21 g/ml

pH: 4.0-7.5

Moisture: ≤0.3%

## 10. Stability And Reactivity

Chemical stability: Stable.

Incompatibility with other materials: Strong oxidizers.

Hazardous polymerization: Will not occur.

## 11. Toxicological Information

Acute oral LD<sub>50</sub> for rat: >430 a.i.mg/kg.



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Acute dermal LD<sub>50</sub> for rabbit: >2000 a.i.mg/kg.

Acute inhalation LC<sub>50</sub> (4 h) for rat: >0.685 a.i. mg/L.

Skin irritation: Mildly- irritating to skin (rabbits).

Eye irritation: Mildly-irritating to eyes (rabbits).

Skin sensitization: Not a skin sensitizer (guinea pigs).

## **12. Ecological And Ecotoxicological Information**

Effect on birds: low toxicity to birds, acute oral LD<sub>50</sub> for Bobwhite quail >9800 a.i.mg/kg.

Effect on fish: high toxicity to fish, acute 96 hour LC<sub>50</sub> for rainbow trout is 0.0125 a.i.mg/L.

Effect on aquatic invertebrates: high toxicity to aquatic invertebrates, acute 48 hour EC<sub>50</sub> for Daphnia magna is 0.0006 a.i.mg/L.

Effect on algae: moderate toxicity to algae, acute 72 hour EC<sub>50</sub> is 0.0125 a.i.mg/L.

Effect on honeybees: high toxicity to honeybees, contact acute 48 hour LD<sub>50</sub> is 0.29 a.i.µg/bee.

Effect on earthworms: low toxicity to earthworms, acute 14 day LC<sub>50</sub> is 1440 a.i.mg/kg.

## **13. Disposal Considerations**

General Disposal: Do not contaminate water, food or feed by disposal.

Guidance

Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility.

Container Disposal: One Gallon and Smaller: Do not reuse container. Wrap container in several layers of newspaper and discard in trash.

Container Disposal Larger Than One Gallon:

Metal Containers – Triple rinse or equivalent in a sanitary landfill, or by other procedures approved by State and local authorities.

Plastic Containers – Triple rinse or equivalent, then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Glass Containers – Triple rinse or equivalent, then dispose of in a sanitary landfill or by other approved state and local procedures.

## **14. Transport Information**



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Not applicable

### 15. Regulatory Information

Not applicable

### 16. Other Information

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