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# MATERIAL SAFETY DATA SHEET

## Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO., LTD

ADD: NO.52 PUCHANG ROAD, PUZHOU INDUSTRIAL PARK, LONGWAN DISTRICT,

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### 1. Chemical Product Identification

Product Name: Teflubenzuron 94% TC

Molecular Formula: C<sub>14</sub>H<sub>6</sub>Cl<sub>2</sub>F<sub>4</sub>N<sub>2</sub>O<sub>2</sub>

Molecular Weight: 381.11 g/mol

Structural Formula:

$$\begin{array}{c|c}
C1 & O & O & F \\
NH - C - NH - C & F
\end{array}$$

Chemical Name: 1-(3,5-dichloro-2,4-difluorophenyl)-3-(2,6-difluorobenzoyl)urea

Physical state: crystal

Color: white to yellowish Odor: practically odorless

CAS No: 83121-18-0

## 2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Teflubenzuron	83121-18-0	94.0
Other ingredients		6.0



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#### 3. Hazards Identification

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

### 4. First Aid Measures

Skin: wash with soap and water.

Eyes: flush with plenty of water for at least 15 minutes. See medical attention if irritation

develops or persists.

Inhalation: move to fresh air. Do not breathe spray mist.

Ingestion: if oral contamination, drink 1-2 glasses of water and milk. Call physician/poison

control center immediately.

Antidite: antropine and toxogonin

### 5. Fire-Fighting Measures

Extinguishing media

To be used: dry chemical, foam, carbon dioxide.

Measures of personal protection: safety glasses or goggles, rubber gloves, shoes plus socks,

long-sleeved shirt, and long pants.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

#### 6. Accidental Release Measures

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

Cleaning methods

EX: clear the material in time. Transfer to a properly labeled deposit that will be closed and sealed until the recovery of elimination of the product.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

## 7. Handling And Storage



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Handling: do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks.

Storage: store in original container only in cool, dry, well-ventilated, secure area out of reach of children and animals.

### 8. Exposure Controls / Personal Protection

Personal protective equipment

Respiratory protection: approved respirator

Protective gloves: rubber gloves

Eye protection: goggles

Industrial hygiene: use good industrial hygiene. Wear face shield or goggles, elbow length PVC gloves, cotton overalls buttoned to the neck and wrist, washable hat and half face respirator with dust and vapor cartridge. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

## 9. Physical And Chemical Properties

Physical state: crystal

Color: white to yellowish

Odor: practically odorless

Melting point: 222.5°C

Boiling point: Decomposes before boiling

Specific gravity: 1.66 g/ml

### 10. Stability And Reactivity

Conditions to avoid: fire, heat and high temperature

Products to avoid: acid and alkaline pesticides

Thermal decomposition: not applicable

Hazardous decomposition products: oxides of nitrogen, hydrogen, carbon, sulfur, and

phoshorous.

### 11. Toxicological Information

Acute oral LD<sub>50</sub> for rat: >5038 a.i.mg/kg.

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



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Acute inhalation LC<sub>50</sub> (4 h) for rat: >5.04 a.i. mg/L.

Skin irritation: Non-irritating to skin (rabbits). Eye irritation: Non-irritating to eyes (rabbits).

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

#### 12. Ecological And Ecotoxicological Information

Effect on birds: low toxicity to birds, acute oral  $LD_{50}$  for Bobwhite quail is >2250 a.i.mg/kg. Effect on fish: high toxicity to fish, acute 96 hour  $LC_{50}$  for Bluegill sunfish is >0.0065 a.i.mg/L.

Effect on aquatic invertebrates: high toxicity to aquatic invertebrates, acute 48 hour EC<sub>50</sub> for Daphnia magna is >0.0028 a.i.mg/L.

Effect on algae: moderate toxicity to algae, acute 72 hour EC<sub>50</sub> is >0.02 a.i.mg/L.

Effect on honeybees: moderate toxicity to honeybees, contact acute 48 hour LD<sub>50</sub> is 100 a.i.μg/bee; oral acute 48 hour LD<sub>50</sub> is 72 a.i.μg/bee.

Effect on earthworms: moderate toxicity to earthworms, acute 14 day LC<sub>50</sub> is >500 a.i.mg/kg.

## 13. Disposal Considerations

Dispose of in compliance with all state and local haws and regulation.

#### 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 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





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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.