

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : zeta-cypermethrin 100g/l EC

Company Identification:

Company: Yongnong Biosciences Co., Ltd.

Address: No. 3, Weiqi Rd (East), Hangzhou Gulf Economy and Technology Development Zone, Shangyu, Zhejiang, China

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Emergency Phone: 86-800-8575300

Product Use: Insecticide

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture (GHS)**

Acute toxicity, Oral (Category 4), H302

Eye irritation (Category 2A), H319

Skin irritation (Category 2), H315

Skin sensitization (Category 1B), H317

Carcinogenicity (Category 2), H351

Specific target organ toxicity (single exposure) (Category 3), H335, H336

Specific target organ toxicity (repeated exposure) (Category 2), H373

Acute aquatic toxicity (Category 1), H400

2.2 GHS Label elements, including precautionary statements (GHS)

Pictogram



Signal word

Warning

Hazard statement (s)

H302: Harmful if swallowed
H319: Causes serious eye irritation
H315: Causes skin irritation
H317: May cause an allergic skin reaction
H351: Suspected of causing cancer
H335: May cause respiratory irritation
H336: May cause drowsiness or dizziness
H373: May cause damage to organs through prolonged or repeated exposure
H400: very toxic to aquatic life

Precautionary statement(s)**Precautionary Statements - Prevention**

P202: Do not handle until all safety precautions have been read and understood
P281: Use personal protective equipment as required
P264: Wash face, hands and any exposed skin thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P271: Use only outdoors or in a well-ventilated area
P272: Contaminated work clothing should not be allowed out of the workplace
P273: Avoid release to the environment.
P260: Do not breathe dust/fume/gas/mist/vapors/spray
P280: Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

P308 + P313: If exposed or concerned: Get medical advice/attention
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing
P337 + P313: If eye irritation persists: Get medical advice/attention
P302 + P352: IF ON SKIN: Wash with plenty of water and soap
P362 + P364: Take off all contaminated clothing and wash it before reuse
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for

breathing

P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

P330: Rinse mouth

Other Information:

Very toxic to aquatic life with long lasting effects

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical name | CAS Number | Concentration (g/L) |
|---|------------|---------------------|
| Active ingredient: zeta-cypermethrin | 52315-07-8 | 100 |
| Inert Ingredients | - | - |

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice

If poisoning occurs, immediately contact a doctor or Poisons Information Centre, and follow the advice given. Show this Material Safety Data Sheet to a doctor.

In case of eye contact

Rinse immediately with plenty of water and seek medical advice.

In case of skin contact

Remove all contaminated clothes and shoes. Wash off immediately with soap and plenty of water (15 - 20 minutes). Get medical attention if irritation persists.

If swallowed

Immediately call a poison control center or doctor Do not induce vomiting unless told to do so by a poison control center or doctor Do not give any liquid to the person Never give anything by mouth to an unconscious person Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

If inhaled

Move to fresh air. If person is not breathing, call 911 (within the U.S. and Canada) or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Other information:

Treat symptomatically and supportively

5. FIRE-FIGHTING MEASURES

Extinguishing media: Dry chemical, carbon dioxide, halon, water spray or standard foam. Unsuitable extinguishing High pressure water jet media

Special exposure hazards: Do not release chemically contaminated water into drains, soil and surface waters.

Special protective: As for all fires involving chemicals: chemical protection suit, suitable gloves equipment for fire-fighters and boots, and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions**

Use personal protective equipment. Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection.

6.2 Environmental precautions

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

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.

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or

disposal.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Keep/store only in original container.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Components with workplace control parameters

No data available

8.2 Appropriate engineering controls

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

8.3 Personal protective equipment

Eye/face protection

For dust, splash, mist or spray exposure, wear chemical protective goggles.

Skin protection

Wear long-sleeved shirt, long pants, socks, and shoes.

Respiratory protection

For dust, splash, mist or spray exposures wear a filtering facepiece respirator (N95, R95, or P95) which is approved for pesticides (U.S. NIOSH/MSHA, EU CEN or comparable certification organization).

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------|------------------|
| a) Physical State | Liquid. |
| b) Color | Light yellow |
| c) Odor | Aromatic Solvent |
| d) pH | 5.9 |
| e) Flash point | 95 °C / 203 °F |

| | |
|-------------------------|----------------------------------|
| f) Density | 0.944g/cm ³ |
| g) Viscosity, kinematic | 40.7 mm ² /s@ 22.4 °C |

10. STABILITY AND REACTIVITY

10.1 Reactivity

None under normal use conditions

10.2 Chemical stability

stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Excessive heat

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

Carbon oxides (CO_x), Hydrogen cyanide, Hydrogen chloride, Chlorine.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral Acute oral LD₅₀ for rats=310 mg/kg.

Dermal Acute percutaneous LD₅₀ for rabbits >5000 mg/kg.

Inhalation LC₅₀ (4 h) >2.03 mg/l. (4-hr) (rat)

Dermal corrosion/irritation

Moderately irritating.

Serious eye damage/eye irritation

Severely irritating (rabbit).

Respiratory or skin sensitization

Sensitizer

Chronic toxicity

zeta-cypermethrin: Long-term exposure caused neurotoxicity (body tremors, decreased motor activity), decreased body weight and increased liver weight.

Mutagenicity

zeta-cypermethrin: Not genotoxic in laboratory studies

Carcinogenicity

Cypermethrin caused an increase in benign lung tumors in mice, but not in rats. EPA has classified cypermethrin as a possible human carcinogen based on this information, but does not regulate based on its low cancer risk. There was no evidence of carcinogenic activity of naphthalene in male mice, but there was some evidence of carcinogenic activity in female mice and clear evidence of carcinogenic activity in male and female rats in 2-year inhalation studies conducted by the National Toxicology Program (NTP).

Neurological effects

zeta-cypermethrin: Causes neurotoxicity (tremors and decreased motor activity) following acute, subchronic or chronic exposure.

Reproductive toxicity

zeta-cypermethrin: No toxicity to reproduction in animal studies.

Developmental toxicity

zeta-cypermethrin: Not teratogenic in animal studies.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

no data available

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Crustacea EC_{50} (48 h) = 0.14 μ g/l.

Fish LC_{50} (96 h) = 0.69 μ g/l.

Algae EC_{50} (72 h) >1 mg/l.

Crustacea (21 d NOEC) =0.01 μ g/l.

Fish (21 d NOEC) =0.015 μ g/l.

12.2 Persistence and degradability

zeta-cypermethrin: Non-persistent. Readily hydrolyzed. Not readily biodegradable.

12.3 Bioaccumulation

zeta-cypermethrin: The substance does not have a potential for bioconcentration.

12.4 Mobility

zeta-cypermethrin: Immobile, Not expected to reach groundwater.

13. DISPOSAL CONSIDERATIONS

Pesticide disposal

Burn in high temperature incinerator with effluent scrubbing or bury in a specially designated landfill. Always dispose of in accordance with local regulations

Container disposal

Bury empty containers eighteen inches below soil surface at a safer disposable site. In a non-crop land away from water supplies. Never reuse for food or water. The used packages shall not be left outside to prevent their reuse. Packages or surplus materials, washings from the machines and containers should be disposed of in a safer manner so as to prevent environmental or water pollution.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 3082

IMDG: 3082

IATA: 3082

14.2 UN proper shipping name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID., N.O.S.
(zeta-cypermethrin)

IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID., N.O.S.

(zeta-cypermethrin)

IATA: Environmentally hazardous substance, liquid, n.o.s. (zeta-cypermethrin)

14.3 Transport hazard class (es)

ADR/RID: 9

IMDG: 9

IATA: 9

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: yes

IMDG: Marine pollutant, yes

IATA: yes

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of GHS (third revised edition).

Local regulations, if any should be applied to classification and labeling.

16. OTHER INFORMATION

This information is provided in good faith but without express or implied warranty.

Buyer assumes all responsibility for safety and use not in accordance with label instruction.