



ZHEJIANG RAYFULL CHEMICALS CO., LTD.

No.113,Puxing Road, Puzhou Industrial Park,Longwan District,
Wenzhou, Zhejiang, China.

Tel: +86-577-88905587,88908853 Fax:+86-577-88905567

Website: <http://www.rayfull.com>

MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO.,LTD

ADD: NO.113 PUXING ROAD, PUZHOU INDUSTRIAL PARK, LONGWAN DISTRICT,
WENZHOU ZHEJIANG P.R. CHINA

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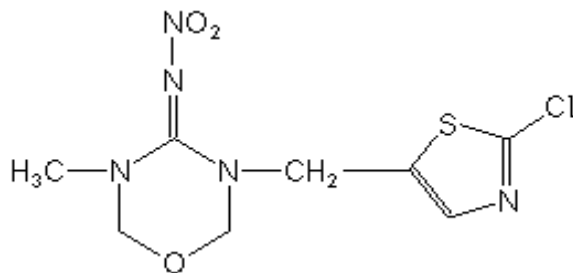
1. Chemical Product Identification

Product Name: Thiamethoxam

Molecular Formula: $C_8H_{10}ClN_5O_3S$

Molecular Weight: 291.50

Structural Formula:



Chemical Name:

(*EZ*)-3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine

Form: Power

Color: White

Odor: Aromatic

CAS No.: 153719-23-4

2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Thiamethoxam	153719-23-4	98.0
Other ingredients		2.0



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3. Hazards Identification

Causes mild eye and skin irritation. Can decompose at high temperatures forming toxic gases.

4. First Aid Measures

Have the product container, label or Material Safety Data Sheet with you when calling a poison control center or doctor, or going for treatment.

If swallowed: Call a poison control center or doctor immediately for treatment

advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes.

Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

5. Fire-Fighting Measures

Flash Point (Test Method):208°F

Unusual Fire, Explosion and Reactivity Hazards:

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire:

Use dry chemical, foam or CO₂ extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. Accidental Release Measures



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In Case of Spill or Leak:

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8.

Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. Handling and Storage

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. Exposure Controls/Personal Protection

Ingestion: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

Eye Contact: Where eye contact is likely, use chemical splash goggles.

Skin Contact: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

Inhalation: A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

9. Physical and Chemical Properties

Melting Point: 139.1°C

Density: $1.57 \times 10^3 \text{ kg/m}^3$

Vapor pressure: $6.6 \times 10^{-9} \text{ Pa}$ 20°C

Solubility: easy soluble in water (4.1g/L) and organic solvents: acetone (48g/L), methanol (13g/L)

Boiling Point: Not Available

PH: 5 - 7 (1% suspension in water)



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10. Stability and Reactivity

Stability: Stable under normal use and storage conditions.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None known.

Can decompose at high temperatures forming toxic gases.

Hazardous Decomposition Products:

Materials to Avoid: None known.

11. Toxicological Information

Ingestion: Oral (LD50 Rat): > 5,000 mg/kg body weight

Dermal: Dermal (LD50 Rabbit): > 2,000 mg/kg body weight

Inhalation: Inhalation (LC50 Rat): > 2.67 mg/l air - 4 hours

Eye Contact: Minimally Irritating (Rabbit)

Skin Contact: Slightly Irritating (Rabbit)

Skin Sensitization: Not a Sensitizer (Guinea Pig)

12. Ecological and Ecotoxicological Information

Summary of Effects: Practically non-toxic to fish, invertebrates and birds. Highly toxic to bees.

Eco-Acute Toxicity: Bees LC50/EC50 0.024 ug/bee

Invertebrates (Water Flea) LC50/EC50 > 100 ppm

Fish (Trout) LC50/EC50 > 100 ppm

Fish (Bluegill) LC50/EC50 > 114 ppm

Birds (8-day dietary - Bobwhite Quail) LC50/EC50 > 5,200 ppm

Birds (8-day dietary - Mallard Duck) LC50/EC50 > 5,200 ppm

Environmental Fate:

The information presented here is for the active ingredient, thiamethoxam.

Not persistent in soil. Stable in water. Moderate mobility in soil. Floats in water (after 24 h).



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13. Disposal Considerations

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local health and environmental regulations.

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 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.