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MATERIAL SAFETY DATA SHEET
ZOECON® YARDEX® INSECTICIDE

Manufacturer: Wellmark International
Address: 1000 Tower Lane, Suite 245 Bensenville, Illinois 60106
Emergency Phone: 1-800-248-7763
Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Zoecon® Yardex Insecticide
Chemical Name/Synonym: tau-Fluvalinate: {(RS)-a-cyano-3-phenoxybenzyl N-(2-chloro-a,a,a-trifluoro-p-tolyl)-D-valinate
Chemical Family: Synthetic pyrethroid
Formula: C₂₆ H₂₁ Cl F₃ N₂ O₃
EPA Registration No.: 2724-478
RF Number:

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
tau-Fluvalinate: {(RS)-a-cyano-3-phenoxybenzyl-N- (2-chloro-a,a,a,(trifluoro-p-tolyl)-D-valinate)	102851-06-9	22.3%	Not established
Inert ingredients (nonhazardous and/or trade secret):		77.7%	Not established
Ethylene glycol	107-21-1		OSHA, ACGIH (STEL) 50 ppm (vapor)

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENT
KEEP OUT OF THE REACH OF CHILDREN

CAUTION: Hazards to Humans - Harmful if swallowed, inhaled or absorbed through skin. Avoid breathing spray mist. Certain persons may be sensitive to YARDEX'S fine spray particles. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Sensitive individuals may temporarily experience an aching, burning, or tingling sensation with or without a rash following exposure. These symptoms will usually subside without requiring medical treatment. Avoid hand or sleeve to face contact. Prior to exposure or after washing an application of corn oil to exposed skin may reduce these symptoms.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Ingestion is unlikely due to physical state. Animal studies indicate a strong emetic response. Typical symptoms are likely to include salivation, nausea, vomiting and initial excitation followed by sedation. Irritation to skin. Sensitive individuals may temporarily experience an itching or burning sensation, with or without a rash, following exposure. Irritating to eyes.

PRIMARY ROUTE OF ENTRY Dermal/Eye: Yes Oral: No Inhalation: Yes

ACUTE TOXICITY
Oral: LD50 (rat): 5150 mg/kg
Dermal: LD50 (rabbit): >2100 mg/kg (highest dose level tested)

Inhalation: LD50: >.52 mg/L (highest dose level tested)
OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Slightly irritating

Eye Irritation: Mild irritant

Sensitizer: Sensitizer in some individuals.

4. FIRST AID MEASURES

Eye: Flush eyes with plenty of water. Call a physician if irritation persists.

Skin: Wash with plenty of soap and water. Apply corn oil to affected area to relieve symptoms. Get medical attention if irritation persists.

Ingestion: Call a physician or poison control center immediately. Drink 1 to 2 glasses of water and induce vomiting by touching the back of throat with a finger. Do not induce vomiting or give anything by mouth to an unconscious person.

Inhalation: Remove victim to fresh air. Apply artificial respiration if indicated

Note to Physician: Treat symptomatically

5. FIRE FIGHTING MEASURES

NFPA Rating: **Health: 3** **Fire: 0** **Reactivity: 0**

Flammability Class: Non-flammable liquid

Flash Point: (TCC) Greater than 100C

Explosive Limits (% of Volume): Not established

Extinguishing Media: Water, foam, CO2, dry chemical

Special Protective Equipment: Firefighters should wear protective clothing and self contained breathing apparatus.

Fire Fighting Procedures: Normal procedures. Do not allow fire fighting water to escape into waterways or sewers.

Combustion Products: Hydrogen cyanide, hydrogen chloride and hydrogen fluoride may result from combustion

Unusual Fire/Explosion Hazards: None known

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken: Ventilate area well; then soak up with soil or other absorbent material. Collect into a container for disposal.

Absorbents: Clay granules, sawdust, dirt or equivalent.

Incompatibles: Strong acids or bases

7. HANDLING AND STORAGE

Handling: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside, then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Storage: Do not contaminate water or food by storage. Store away from direct sunlight or heat. Pesticides must be stored in a secured area away from other products, and food.

8. EXPOSURE CONTROL / PERSONAL MEASURES

Exposure Limits: Ethylene Glycol - OSHA and ACGIH short term exposure limit (STEL)
50 ppm (vapor)

Ventilation: Use with adequate ventilation.

Personal Protective Equipment: Applicators and handlers must wear: long-sleeved shirt and long pants, chemical resistant gloves, shoes plus socks and dust/mist filtering respirator
NIOSH approval number prefix TC-21C

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Milky white liquid; distinctive odor.

Boiling Point: N/A

Melting Point: N/A

Vapor Pressure (mm Hg): N/A

Vapor Density (Air = 1): N/A

Specific Gravity: 1.12 (water=1)

Bulk Density: 9.3 lb/gal

Solubility: Miscible in water

Evaporation Rate: Not determined

pH: 5 - 6

10. STABILITY AND REACTIVITY

Stability: Stable

Reactivity: Not reactive

**Incompatibility w/ Other
Materials:** Strong acids or bases

Decomposition Products: None

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY [Specific to Active Ingredient(s)]

Rats received tau-fluvalinate via lavage. No oncogenic potential was shown. The NOEL was 1 mg/kg/day.

DEVELOPMENTAL/REPRODUCTIVE TOXICITY [Specific to Active Ingredient(s)]

Rabbits were administered tau-fluvalinate during presumed gestation. Signs of maternal toxicity were anorexia, depression, and decreased body weights at 125 mg/kg/day. The NOEL was 25 mg/kg/day.

MUTAGENICITY [Specific to Active Ingredient(s)]

The weight of evidence suggests tau-fluvalinate is not a mutagen.

OTHER

In rats, oral administration of 60 mg/kg daily for 7 consecutive days resulted in histopathological evidence of neurotoxicity in the peripheral nervous system. However, the changes were not persistent and were no longer evident following 2 weeks without treatment.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE [Active Ingredients Only]

- Hydrolysis:** Not available
- Photolysis:** Not available
- Soil half life:** 14.9 days
- Water solubility:** Readily disperses in water

ECOTOXICITY [Active Ingredients Only]

- Acute Toxicity:** Toxic to fish and aquatic invertebrates. fish:LC50 (bluegill): 11 ug/L, (trout): 4.2 ug/L; aquatic invertebrates:LC50 (daphnia): 11 ug/L

13. DISPOSAL CONSIDERATIONS

Do not contaminate water by disposal. Wastes resulting from the use of this product may be disposed of on site or at any approved waste disposal facility. Triple rinse container (or equivalent). Puncture and dispose of in a sanitary landfill, by incineration or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

14. TRANSPORT INFORMATION

- DOT49CFR Description:** Not applicable
- Freight Classification:** Insecticides NOI other than poison NMFC item 102120, Class 60

15. REGULATORY INFORMATION

- CERCLA (Superfund):** Not regulated
- RCRA:** Not regulated as hazardous

SARA 311/312 HAZARD CATEGORIES

- Immediate Health:** Yes (irritation, possible sensitization)
- Delayed Health:** No
- Fire:** No
- Sudden Pressure:** No
- Reactivity:** No

The information presented herein, while not guaranteed, was prepared by technically knowledgeable personnel and to the best of our knowledge is true and accurate. It is not intended to be all inclusive and the manner and conditions of use and handling may involve other or additional considerations.