

MATERIAL SAFETY DATA SHEET
ZOECON APISTAN® ANTI-VARROA MITE STRIP

Manufacturer: Wellmark International
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Emergency Phone: 1-800-248-7763
Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Zoecon Apistan® Anti-Varroa Mite Strip
Chemical Name/Synonym: tau-Fluvalinate: (RS)- α -cyano-3-phenoxybenzyl N-(2-chloro- α,α,α -trifluoro-p-tolyl)-D-valinate
Chemical Family: Synthetic pyrethroid
Formula: C₂₆ H₂₂ Cl F₃ N₂ O₃
EPA Registration No.: 2724-406
RF Number: 318G

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
tau-Fluvalinate: (RS)- α -cyano-3-phenoxybenzyl N-(2-chloro- α,α,α -trifluoro-p-tolyl)-D-valinate	102851-06-9	10.25	Not established
Inert Ingredients (non-hazardous/trade secret)		89.75	

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENT
KEEP OUT OF THE REACH OF CHILDREN
CAUTION: MOUTH. HARMFUL IF SWALLOWED. WASH HANDS THOROUGHLY WITH SOAP AND WATER AND AFTER HANDLING STRIP.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Clinical symptoms may include salivation, depression, labored breathing, diarrhea. In certain Individuals, a temporary sensory effect (itching, tingling, numbness) may occur which usually subsides without medical treatment.

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

ACUTE TOXICITY

Oral: LD50 (rat): >3000 mg/kg/bwt (highest dose level tested)
Dermal: LD50 (rabbit): >2000 mg/kg/bwt (highest dose level tested)
Inhalation: Not known

OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Slight (rabbit), may cause temporary peripheral sensory phenomenon (paresthesia) in some individuals.

Eye Irritation: Mild (rabbit)

Sensitizer: Non-sensitizing

4. FIRST AID MEASURES

Eye: Very unlikely to occur due to product form

Skin: Wash thoroughly with soap and water. If irritation appears consult a physician

Ingestion: If swallowed, call a poison control center or Dr. immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything to an unconscious person.

Inhalation: Very unlikely to occur due to product form

Note to Physician: Treat symptomatically

5. FIRE FIGHTING MEASURES

NFPA Rating: **Health: 1** **Fire: 0** **Reactivity: 0**

Flammability Class: Combustible solid

Flash Point: Does not flash

Explosive Limits (% of Volume): Not established

Extinguishing Media: Water, foam, dry chemical, CO2

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 form on burning.

Unusual Fire/Explosion Hazards: None known

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken: Because of product form and packaging, possibilities of a spill are remote. However, should one occur, wear proper protective equipment (See Special Protective Equipment) and sweep up spill. Place in a container for disposal.

Absorbents: Due to product form, no absorbents should be necessary. If in some liquid form, use clay granules, sawdust, dirt or equivalent.

Incompatibles: Strong acids or bases

7. HANDLING AND STORAGE

Handling: Wear gloves (e.g. latex) when handling the strips. Wash hands, face and arms thoroughly with soap and water after handling product.

Storage: Do not contaminate water, food, or feed by storage. Store in unopened protective pouch. Do not open pouch until ready to use. Do not store unused strips in anything but original package. Do not store in direct sun light

8. EXPOSURE CONTROL / PERSONAL MEASURES

Exposure Limits:	Not established
Ventilation:	Provide mechanical ventilation when handling
Personal Protective Equipment:	Wear gloves (e.g. latex) when handling the strips. Wash hands, face and arms thoroughly with soap and water after handling product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Light golden colored, clear plastic strip, very low odor.
Boiling Point:	N/A
Melting Point:	N/A
Vapor Pressure (mm Hg):	Not determined
Vapor Density (Air = 1):	Not determined
Specific Gravity:	N/A
Bulk Density:	N/A
Solubility:	None
Evaporation Rate:	N/A
pH:	N/A

10. STABILITY AND REACTIVITY

Stability:	Stable
Reactivity:	Not reactive
Incompatibility w/ Other Materials:	Strong oxidizing agents
Decomposition Products:	Hydrogen cyanide, hydrogen fluoride, hydrogen chloride, carbon monoxide, carbon dioxide
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY [Specific to Active Ingredient(s)]

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

Mice were fed diets containing tau-fluvalinate. With the exception of skin lesions, no compound-related toxicity was observed. No oncogenic potential was shown. The systemic NOEL was considered to be 20/mg/kg/day.

Dogs were treated with racemic tau-fluvalinate daily for six months. Vomiting and diarrhea occurred at 50 mg/kg/day and skin lesions at the 3 highest levels. The NEL was determined to be 2 mg/kg/day.

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

Rats were administered racemic tau-fluvalinate during presumed gestation. The developmental NEL was 10 mg/kg/day. Skin lesions were observed at 100 ppm and above. Treatment-related mortality occurred at 500 and 1000 ppm. In the first generation, pup growth was inhibited at levels of 250 ppm and above during lactation. The NEL was 20 ppm.

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

MUTAGENICITY [Specific to Active Ingredient(s)]

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

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE [Active Ingredients Only]

- Hydrolysis:** Main mechanism of dissipation at basic pH
- Photolysis:** Degraded rapidly in sunlight and artificial light
- Soil half life:** 6-15 days depending on soil type and oxygen
- Water solubility:** 0.002 mg/L at 25C

ECOTOXICITY [Active Ingredients Only]

- Acute Toxicity:** fish:LC50 (rainbow trout): 2.7 ug/L (96 hour study); (bluegill): 6.2 ug/L (96 hour study); aquatic invertebrates:LC50 (Daphnia Magna): 1.0 ug/L (48 hour study)

13. DISPOSAL CONSIDERATIONS

Do not contaminate water, food, or feed by disposal. Do not reuse container or used strip. If household waste, wrap and put in trash. If large numbers of strips are to be discarded, dispose of in an approved landfill or incinerator. In all cases, it is best to consult local authorities as to appropriate disposal procedures and locations.

14. TRANSPORT INFORMATION

- DOT49CFR Description:** Not regulated as hazardous by D.O.T.
- Freight Classification:** Insecticide, NOI, other than poison in boxes. NMFC 102120 (2)

15. REGULATORY INFORMATION

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

SARA 311/312 HAZARD CATEGORIES

- Immediate Health:** Yes (irritant)
- 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.