

MATERIAL SAFETY DATA SHEET
ZODIAC SPOT ON PLUS FLEA & TICK CONTROL FOR CATS 5 LBS. AND OVER

Manufacturer: Wellmark International
Address: 1501 East Woodfield Road, Suite 200 West Schaumburg, IL 60173
Emergency Phone: 1-800-950-4783
Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Zodiac Spot On Plus Flea & Tick Control For Cats 5 Lbs. And Over
Chemical Name/Synonym: (S)-Methoprene: Isopropyl(2E,4E,7S)-11-methoxy-3,7,11-trimethyl- 2,4-dodecadienoate,
Etofenprox: 2-(4-ethoxyphenyl)-2-methylpropyl-3-phenoxybenzyl ether
Chemical Family: Terpenoid, Pyrethroid
Formula: C₁₉ H₃₄ O₃, C₃₅ H₂₈ O₃
EPA Registration No.: 2724-504
RF Number: RF 2004 CCSO

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
(S)-Methoprene: Isopropyl (2E,4E,7S)-11-methoxy-3,7,11-trimethyl-2,4-dodecadienoate	65733-16-6	3.60%	Not Established
Etofenprox: 2-(4-ethoxyphenyl)-2-methylpropyl-3-phenoxybenzyl ether	80844-07-01	40.00%	Not Established
Inert ingredients (non hazardous and/or trade secret)		56.40%	Not Established

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENT
Keep out of the reach of children.
Repeated exposure to etofenprox can cause skin irritation

PRIMARY ROUTE OF ENTRY **Dermal/Eye:** Yes **Oral:** Yes **Inhalation:** N/A

ACUTE TOXICITY

Oral: LD50 > 5000 mg/kg (rat)
Dermal: LD50 > 5,000 mg/kg (rat)
Inhalation: (R/S)-Methoprene LC50 (rat)>210 mg/L air
Etofenprox: LC50 >5.9 mg/L

OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Mild irritation (rabbit)
Eye Irritation: Minimal irritation (rabbit)
Sensitizer: Not a sensitizer

4. FIRST AID MEASURES

Eye: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes

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

Ingestion: Call a physician or poison control center immediately for guidance. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never give anything by mouth to an unconscious person.

Inhalation: Remove affected person to fresh air. Call a poison control center or doctor for further treatment advice.

Note to Physician: Treat Symptomatically

5. FIRE FIGHTING MEASURES

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

Flash Point: 112°C

Explosive Limits (% of Volume): N/A

Extinguishing Media: Water, CO2 dry chemicals, foam

Special Protective Equipment: Firefighters should wear full protective clothing including self-contained breathing apparatus.

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

Combustion Products: Carbon dioxide and carbon monoxide

Unusual Fire/Explosion Hazards: None Known

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken: Do not allow spill to enter waterways inhabited by aquatic organisms. Soak up with absorbent material and place in a suitable container for disposal.

Absorbents: Clay granules, sawdust, dirt or equivalent.

Incompatibles: Strong oxidizing agents

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes, skin or clothing. Wash hands after handling.

Storage: Keep out of the reach of children. Do not store near food or food stuff.

8. EXPOSURE CONTROL / PERSONAL MEASURES

Exposure Limits: Not Established

Ventilation: General ventilation is sufficient under normal use conditions.

Personal Protective Equipment: Not needed if product is used according to label. If prolonged exposure is anticipated, it is recommended to wear impervious gloves and safety glasses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Pale yellow liquid with pleasant, weak fruit-like odor
Boiling Point:	Not determined
Melting Point:	Not determined
Vapor Pressure (mm Hg):	Not determined
Vapor Density (Air = 1):	Not determined
Specific Gravity:	0.9931
Bulk Density:	Not determined
Solubility:	Not soluble in water
Evaporation Rate:	Not determined
pH:	Not determined

10. STABILITY AND REACTIVITY

Stability:	Stable
Reactivity:	Not determined
Incompatibility w/ Other Materials:	Strong oxidizing agents
Decomposition Products:	Carbon monoxide and Carbon dioxide
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY

Methoprene [Based on (RS) Methoprene Tech] is not a carcinogen. The NOEL for non-carcinogenic effects in an 18 month mouse study was 250 ppm.

Etofenprox is not a human carcinogen (EPA Category C). It is not listed as a carcinogen by NTP or IARC and is not regulated by OSHA. In rats the target organs are the liver and thyroid. The NOAEL for chronic toxicity is 3.7 mg/kg/day for male rats. The target organ in mice is the kidney. The NOAEL is 3.1 mg/kg/day for mice.

SUBCHRONIC TOXICITY

Etofenprox is a mild skin irritant after 4-weeks of treatment. No systemic toxicity from dermal exposure was observed at doses up to 1000 mg/kg/day.

DEVELOPMENTAL/REPRODUCTIVE TOXICITY

Methoprene [Based on (RS) Methoprene Tech] is not a teratogen. The NOEL for maternal and embryo toxicity in rabbits was 200 mg/kg/day. The NOEL for reproductive effects in rats was 2,500 ppm.

Etofenprox is not a teratogen. It does not have adverse effects on reproduction.

MUTAGENICITY

Methoprene [Based on (S) Methoprene Tech] is not a mutagen.

Etofenprox is not a mutagen.

12. ECOLOGICAL INFORMATION

<u>ENVIRONMENTAL FATE</u>	(RS) Methoprene	Etofenprox
Hydrolysis:	T1/2 > 4 week	N/A
Photolysis:	T1/2 < 6 hours	N/A
Soil half life:	~ 10 days	N/A
Water solubility:	0.52 ppm	N/A

ECOTOXICITY

Acute Toxicity: **(S) Methoprene Technical:** LC50 (trout): 760ppb, LC50 (Bluegill): >370ppb; aquatic invertebrates: LC50 (Daphnia): 360 ppb
Etofenprox Technical: extremely toxic to fish and aquatic invertebrates. LC50 (trout) 3.3 ppb and LC50 (bluegill) 8.5 ppb,

13. DISPOSAL CONSIDERATIONS

Do not reuse empty tube. If household waste, wrap empty tube and discard in trash. For larger amounts, consult state and local regulations for proper disposal.

14. TRANSPORT INFORMATION

DOT49CFR Description: Not regulated as hazardous under DOT

Freight Classification: Animal Insecticides N.O.I. O/T Poison

15. REGULATORY INFORMATION

CERCLA (Superfund): Not listed

RCRA: Not Regulated

SARA 311/312 HAZARD CATEGORIES

Immediate Health: No

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.