

MATERIAL SAFETY DATA SHEET

Zoecon[®] Zenprox[™] Aerosol

Manufacturer: Wellmark International

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Emergency Phone: 1-888-914-2082

Transportation Emergency Phone: CHEMTREC: 1-800-424-9300

1. CHEMICAL PRODUCT INFORMATION

Product Name: Zoecon[®] Zenprox[™] Aerosol

Chemical Name/Synonym: Etofenprox: 2-(4-ethoxyphenyl)-2-methylpropyl 3-phenoxybenzyl ether
Tetramethrin: cyclohex-1-ene-1,2-dicarboximidomethyl chrysanthemate
Piperonyl butoxide: 2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether
Pyrethrins; a mixture of Pyrethrin I, Pyrethrin II, Jasmolin I, Jasmolin II, Cinerin I, and Cinerin II

Chemical Family: Pyrethroid

Formula: C₂₅H₂₈O₃ / C₁₉H₂₅NO₄ / C₁₉H₃₀O₅ / C₂₁ H₂₈ O₃ / C₂₂ H₂₈ O₅

EPA Registration No.: 2724-675

RF Number: RF2041B

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component (chemical, common name)</u>	<u>CAS Number</u>	<u>Weight</u>	<u>Tolerance</u>
Etofenprox	80844-07-1	1%	not est
Tetramethrin	7696-12-0	0.5%	not est
Pyrethrins	8003-34-7	0.15%	5 mg/m ³ OSHA&ACGIH
Piperonyl Butoxide	51-03-6	1.5%	not est
Distillates Petroleum	64742-47-8	10%	1200 mg/m ³ (TWA)
Hydrocarbon Propellant Blend:		14.50%	
Propane	74-98-6		1000 ppm*
n-Butane	106-97-8		800 ppm*

* established by
NIOSH

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENTS
KEEP OUT OF REACH OF CHILDREN
HAZARD TO HUMANS & DOMESTIC ANIMALS
CAUTION
HARMFUL IF SWALLOWED. CAUSES MODERATE EYE IRRITATION. AVOID CONTACT WITH EYES OR CLOTHING. WASH HANDS THOROUGHLY WITH SOAP AND WATER AFTER HANDLING AND BEFORE EATING, DRINKING, CHEWING GUM, USING TOBACCO, OR USING THE TOILET. REPEATED EXPOSURE TO ETOFENPROX CAN CAUSE SKIN IRRITATION. PERSONAL PROTECTIVE EQUIPMENT (PPE): APPLICATORS AND OTHER HANDLERS MUST WEAR LONG-SLEEVE SHIRT, LONG PANTS, SHOES AND SOCKS. USER SAFETY REQUIREMENTS: FOLLOW MANUFACTURER'S INSTRUCTIONS FOR CLEANING/MAINTAINING PPE. IF NO SUCH INSTRUCTIONS FOR WASHABLES EXIST, USE DETERGENT AND HOT WATER. KEEP AND WASH PPE SEPARATELY FROM OTHER LAUNDRY.

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

ACUTE TOXICITY **Oral:** Harmful if swallowed
 Dermal: No specific hazard identified
 Inhalation: No specific hazard identified

OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Slightly irritating
Eye Irritation: Moderately irritating
Sensitizer: Not a skin sensitizer

4. FIRST AID MEASURES

If in eyes:

- Hold eye 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.
- Call a poison control center or doctor for treatment advice.

If swallowed:

- Immediately call a poison control center or doctor.
- Do not induce vomiting unless told to 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.

Note to Physician: Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

5. FIRE FIGHTING MEASURES

NFPA Rating: **Health: 2** **Fire: 2** **Reactivity: 0**
Flammability Class: Level 1 Aerosol
Flash Point/Flame Extension: 0 inches
Explosive Limits (% of Volume): Not available
Extinguishing Media: Water spray, foam, dry chemical, CO2
Special Protective Equipment: Firefighters should wear full protective clothing including self-contained breathing apparatus.
Fire Fighting Procedures: Use water to keep fire exposed containers cool. Do not allow run-off to enter waterways or sewers. Contents under pressure.
Combustion Products: Products of combustion are principally carbon dioxide, carbon monoxide, and water, with trace decomposition of Cl-, NOx, POx, and SOx.
Unusual Fire/Explosion Hazards: Contents under pressure.

6. ACCIDENTAL RELEASE MEASURES

Steps to be taken: Absorb spills with an inert material. Place in container for disposal. Do not allow spill to enter waterways or sewers.
Absorbents: Clay granules, sawdust, dirt, or equivalent.
Incompatibles: None known

7. HANDLING AND STORAGE

Handling: Wash hands with soap and water after handling material. Avoid contact with skin, eyes, or clothing.
Storage: Do not store above 130°F. Do not store near open flames. Store in a cool, dry place away from children. Do not contaminate water, food, or feed, by storage.

Zoecon® Zenprox™ Aerosol

8. EXPOSURE CONTROL/PERSONAL MEASURES

Exposure Limits: Pyrethrins 5 mg/m³ (OSHA & ACGIH). Petroleum Distillates 1200 mg/m³. Propane 1000 ppm. N-butane 800 ppm.

Ventilation: Use only with adequate ventilation.

Personal Protective Equipment: Use safety glasses at a minimum; professional applicators (those with repeated and extended exposure) should wear goggles at a minimum when working with this product. APPLICATORS AND OTHER HANDLERS MUST WEAR LONG-SLEEVE SHIRT, LONG PANTS, SHOES AND SOCKS.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: White Emulsion with solvent smell

Boiling Point: N/A

Melting Point: N/A

Vapor Pressure (mm Hg): N/A

Vapor Density (Air = 1): N/A

Specific Gravity: 0.97g/cm³ (Prefill, at 20 °C)

Bulk Density: N/A

Solubility: N/A

Evaporation Rate: N/A

pH: N/A

10. STABILITY AND REACTIVITY

Stability: Stable

Reactivity: None- reactive

Incompatibility w/ Other Materials: N/A

Decomposition Products: N/A

Hazardous Polymerization: Will not occur

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Acute oral toxicity: LD₅₀ >5000 mg/kg

Acute dermal toxicity: LD₅₀ >5000 mg/kg

Acute inhalation: LC₅₀ >2.06 mg/L

Skin irritation: Slightly irritating

Eye irritation: Mildly irritating

The product is not a dermal sensitizer

CHRONIC TOXICITY [Specific to Active Ingredient(s)]

Pyrethrins: Marginally higher incidences of benign thyroid, parathyroid, ovary, and liver tumors were observed in rats and in lungs of mice following lifetime high dose exposure to pyrethrum. The significance of these observations is questionable.

Carcinogenicity: NTP: No. IARC: No. OSHA: No.

Etofenprox 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.

Carcinogenicity: NTP: No IARC: No OSHA: No

Tetramethrin is classified by EPA as Class C (possible human carcinogen).

Piperonyl butoxide: An increase in the number of benign liver tumors in mice fed piperonyl butoxide technical at doses which far exceeded any anticipated daily human intake. Independent and industry toxicology experts have reviewed the data and agree that the findings of the study do not indicate a health risk to humans.

Carcinogenicity: NTP: No IARC: No OSHA: No

SUBCHRONIC TOXICITY [Specific to Active Ingredient(s)]

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.

Tetramethrin in rats the NOEL for 13-week inhalation study is $>5.03 \text{ mg/m}^3$ and for 6-month feeding study is 1500 ppm. In dogs the NOEL for a 90-day feeding study is $>5000 \text{ ppm}$.

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

Pyrethrins: There were no birth defects or adverse effects on reproductive parameters in tests with rats or rabbits. It is not considered to be teratogenic.

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

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

Piperonyl butoxide: There were no birth defects or adverse effects on reproductive parameters in tests with rats or rabbits. It is not considered to be teratogenic.

MUTAGENICITY [Specific to Active Ingredient(s)]

Etofenprox is not a mutagen.

Tetramethrin is not a mutagen when tested for gene mutations, Chromosomal aberrations, and unscheduled DNA synthesis.

Piperonyl butoxide is not genotoxic in several tests including the Ames assay, chromosome aberrations in Chinese hamster ovary (CHO) cells, CHO/HGPRT assay with S9 activation, and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells.

12. ECOLOGICAL INFORMATION

ECOTOXICITY [Active Ingredients Only]

Pyrethrins

Acute Toxicity: Rainbow trout: $LC_{50} = 5.1 \text{ ppb}$
Sheepshead minnow: $LC_{50} = 16.0 \text{ ppb}$
Mysid shrimp: $LC_{50} = 1.4 \text{ ppb}$
Daphnia magna: $EC_{50} = 11.6 \text{ ppb}$

Etofenprox

Acute Toxicity: Rainbow trout: $LC_{50} = 3.3 \text{ ppb}$
Bluegill: $LC_{50} = 8.5 \text{ ppb}$

Tetramethrin

Acute Toxicity: Rainbow trout: $LC_{50} = 43.5 \text{ ppb}$
Bluegill: $LC_{50} = 157.3 \text{ ppb}$
Daphnia: $LC_{50} > 300 \text{ mg/L}$

Piperonyl butoxide

Acute Toxicity: Rainbow trout: $LC_{50} = 6.12 \text{ ppm}$
Bluegill: $LC_{50} = 8.5 \text{ ppb}$ 5.37 ppm
Sheepshead minnow: $LC_{50} = 3.94 \text{ ppm}$
Mysid shrimp: $LC_{50} = 0.32 \text{ ppm}$

13. DISPOSAL CONSIDERATIONS

Wastes resulting from use of this product should be disposed of in accordance with all federal, state and local requirements. For additional regulatory information, see section 15 of this document.

14. TRANSPORT INFORMATION

DOT49CFR Description: Aerosol Limited Quantity

Freight Classification: Insecticides NOI NMFC I-155050 SUB 5 CLASS 65

15. REGULATORY INFORMATION

CERCLA (Superfund): Pyrethrins (1 Lb).

RCRA: Not regulated.

SARA 311/312 HAZARD CATEGORIES

Immediate Health: Yes

Delayed Health: No

Fire: Yes

Sudden Pressure: Yes

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.