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MATERIAL SAFETY DATA SHEET - PPM PETCOR® FLEA SPRAY

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: PPM Petcor® Flea Spray
Chemical Name/Synonym: (S)-Methoprene; isopropyl (2E, 4E, 7S)-11-methoxy-3, 7, 11-trimethyl-2, 4-dodecadienoate, Pyrethrins; a mixture of pyrethrin I, pyrethrin II, jasmolin I, jasmolin II, cinerin I, and cinerin II, Piperonyl Butoxide; 5-[2-(2-butoxyethoxy)ethoxymethyl]-6-propyl-1,3-benzodioxole, N-octyl bicycloheptane dicarboximide; N-(2ethylhexyl)-5-norbornene-2,3-dicarboximide
Chemical Family: Terpenoid, Pyrethroid, Benzodioxole, Dicarboximide
Formula: C₁₉ H₃₄ O₃, C₂₁ H₂₈ O₃, C₂₂ H₂₈ O₅, C₂₁ H₃₀ O₃, C₂₂ H₃₀ O₅, C₂₀ H₂₈ O₃, and C₂₁ H₂₈ O₅, respectively, C₁₉ H₃₀ O₅, C₁₇ H₂₅ O₂
EPA Registration No.: 2724-404
RF Number: 322

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component (chemical, common name)	CAS Number	Weight	Tolerance
(S)-Methoprene; Isopropyl (2E, 4E, 7S)-11-methoxy-3, 7, 11-trimethyl-2, 4-dodecadienoate	65733-16-6	0.25%	Not established
Pyrethrins	8003-34-7	0.18%	5 mg/m ³ (OSHA & ACGIH)
Piperonyl Butoxide	51-03-6	0.36%	Not established
N-octyl bicycloheptane dicarboximide	113-48-4	0.60%	Not established
Isopropyl Alcohol	67-63-0		980 mg/m ³ (OSHA); 983 mg/m ³ (ACGIH)

3. HAZARD INFORMATION

PRECAUTIONARY STATEMENT

CAUTION: HARMFUL IF ABSORBED THROUGH SKIN. AVOID CONTACT WITH SKIN, EYES, OR CLOTHING. MAY CAUSE DERMAL SENSITIZATION.

SIGNS AND SYMPTOMS OF OVEREXPOSURE: Those associated with allergies, hay fever, i.e., itchy, runny eyes, stuffy/runny nose, chest discomfort, possible hives. In addition, alcohol may cause ataxia, dizziness.

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

ACUTE TOXICITY

Oral: LD₅₀ (rat): >5,100 mg/kg (highest dose level tested)
Dermal: LD₅₀ (rabbit): >2,100 mg/kg (highest dose level tested)
Inhalation: Not determined

OTHER TOXICOLOGICAL INFORMATION

Skin Irritation: Non irritating (rabbit)
Eye Irritation: Moderately irritating (rabbit)
Sensitizer: Positive (guinea pig)

4. FIRST AID MEASURES

Eye: Flush immediately with water. If irritation persists, get medical attention.
Skin: Wash with plenty of soap and hot water.
Ingestion: Call a physician or Poison Control Center. Give 1-2 glasses of water and induce vomiting. Do not give anything by mouth or induce vomiting to an unconscious person.
Inhalation: Remove to fresh air.
Note to Physician: Treat symptomatically

5. FIRE FIGHTING MEASURES

NFPA Rating: Health: 0 Fire: 4 Reactivity: 0
Flammability Class: Flammable liquid
Flash Point: 21°C/70°F
Explosive Limits (% of Volume): Lower: 2, Upper: 12
Extinguishing Media: Dry Chemical, CO₂, or Alcohol Foam (water may be ineffective)
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: None known
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 container for disposal.
Absorbents: Clay granules, sawdust, dirt or equivalent.
Incompatibles: Strong oxidizers

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapors. Wash thoroughly with soap and water after handling.

Storage: Do not use or store near heat or open flame. Store away from children.

8. EXPOSURE CONTROL/PERSONAL MEASURES

Exposure Limits: Pyrethrins = 5mg/m³ (OSHA PEL & ACGIH TLV), Isopropyl Alcohol = 980 mg/m³ (OSHA PEL), 983 mg/m³ (ACGIH TLV).

Ventilation: Use with adequate ventilation.

Personal Protective Equipment: If prolonged exposure is anticipated, users and handlers should wear a MSHA/NIOSH approved organic vapor/pesticide respirator, impervious gloves, goggles, and other protective clothing to prevent skin contact.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Pale yellow, transparent liquid, odor of isopropyl alcohol	Specific Gravity: .8767 @ 25°C/20°C
Boiling Point: N/A	Bulk Density: 7.3 lbs/gal
Melting Point: Not applicable	Solubility: Miscible in water
Vapor Pressure (mm Hg): N/A	Evaporation Rate: N/A
Vapor Density (Air = 1): N/A	pH: Not applicable

10. STABILITY AND REACTIVITY

Stability: Stable	Decomposition Products: None
Reactivity: Nonreactive	Hazardous Polymerization: Will not occur
Incompatibility with Other Materials: Strong oxidizers	

11. TOXICOLOGICAL INFORMATION

CHRONIC TOXICITY [Specific to Active Ingredient(s)]

TARGET ANIMAL SAFETY: Safety of this product has been evaluated in groups of dogs and cats, the target animals for this formulation. No adverse effects were observed when this product was applied repeatedly (7 day intervals) at levels up to 5 times of the label recommended rate. (S)-Methoprene is not considered as an oncogenic compound. No evidence of compound related gross or histopathologic lesions, organ weight variations or tumorigenic effects was observed at dietary levels up to and including 5,000 ppm (HDT - highest dose tested) in a 2-year chronic toxicity/oncogenicity study in rats. Also, in mice (18-month chronic toxicity/oncogenicity) (S)-Methoprene produced no compound related effect on body weight, food consumption, or survival rate. No gross pathological lesions or tumorigenic effects were observed at levels up to 2,500 ppm (HDT). An unidentified brown pigment was observed in liver cells of some animals of mid and high dose groups. NOEL in this study for mice was 250 ppm. In a 2-year feeding study, rats were fed pyrethrum at dietary levels of 10, 50, and 250 mg/kg/day. The highest level had no significant effect on growth or survival. Slight, though definite, liver damage was observed, especially at higher dosage levels. In a 90-day feeding study, dogs that were fed pyrethrins at a dietary level of 5,000 ppm showed tremors, ataxia, labored respiration, and salivation during the first month of exposure. In rats at a dietary level of 10,000 ppm of Piperonyl Butoxide, (dosage of 650 mg/kg/day), there was a moderate reduction of weight gain, increased relative weight of the kidneys, and increased relative weight of the liver. A 2-year bioassay of technical Piperonyl Butoxide for possible carcinogenicity was conducted by administering dietary levels of 5,000 and 10,000 ppm to rats and mice. In the female rats, lymphomas occurred at incidences that were dose related. In the male mice, adenomas of the lacrimal gland occurred at incidences that were dose related but were not significantly higher than that in the control group. Thus, the occurrence of this tumor in the male mice was not clearly related to the administration of Piperonyl Butoxide.

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

(S)-Methoprene did not affect the reproductive performance of rats when tested at levels up to 2,500 ppm over a period of 3 generations. The NOEL for reproductive toxicity in rats was 500 ppm. No teratogenic effects were observed in mice when female mice were fed (S)-Methoprene at levels up to 500 mg/kg/day during days 7 to 14 of the gestation period. In rabbits, no teratogenic effects were observed at levels up to 2,000 mg/kg/day, the maximum tolerated dose for maternal toxicity. NOEL for maternal and embryotoxicity in rabbit was 200 mg/kg/day fed to pregnant animals during days 7-18 of the gestation period. Rats were given pyrethrins via gavage at doses of 50, 100, and 150 mg/kg. Increased resorptions were found at the 100 and 150 mg dose levels. No significant increase in defect rate was found. Decreased reproduction occurred in rats at dose levels of 650 mg/kg/day of Piperonyl Butoxide. There was a delay of over 23 days to the first litter, reduced average number of litters, reduced average weight of pups at 4 weeks of age, and a trend to smaller litters. In a separate study, Piperonyl Butoxide was administered to rats by gavage at 300 and 1,000 mg/kg. Piperonyl Butoxide was found not to be teratogenic at levels below maternally toxic levels.

MUTAGENICITY [Specific to Active Ingredient(s)]

(S)-Methoprene is not a mutagenic compound. It has been found negative in the following tests: a) Ames Test (in vitro), b) Chromosomal aberration in CHO cells (in vitro) and c) Dominant lethal assay (in vivo test for chromosomal damage) test. Piperonyl Butoxide is not considered to be a mutagen.

OTHER

U.S. EPA has evaluated other similar products toxicity as part of the U.S. registration process. EPA requires extensive toxicity tests be performed before any chemical is approved for use. Based on their review of test results, they have determined that no significant risk to users, the public, or the environment exists when this product is used as indicated on the product label.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE (Active Ingredients Only)

Hydrolysis: T _{1/2} >4 weeks ((S)-Methoprene)
Photolysis: T _{1/2} <10 hours ((S)-Methoprene)
Soil half life: ~ 10 days ((S)-Methoprene)
Water solubility: <2 ppm ((S)-Methoprene)

ECOTOXICITY (Active Ingredients Only)

Acute Toxicity: fish: LC ₅₀ (trout): 760 ppb, (bluegill): > 370 ppb ((S)-Methoprene);
aquatic invertebrates: LC ₅₀ (Daphnia): 360 ppb ((S)-Methoprene)

13. DISPOSAL CONSIDERATIONS

Entire contents and rinsate must be used according to label direction. Triple-rinsed containers may be placed in trash. Unused product must be delivered to an EPA approved hazardous waste management facility.

14. TRANSPORTATION INFORMATION

DOT49CFR Description: Consumer Commodity, ORM-D

Freight Classification: Insecticide Liquid, N.O.S. Flammable liquid, NA1993

15. REGULATORY INFORMATION

CERCLA (Superfund): Reportable Quantity (RQ) -
Pyrethrins = 1 lb
RCRA: Regulated due to ignitability

SARA 311/312 HAZARD CATEGORIES

Immediate Health: Yes (irritation)
Delayed Health: No
Fire: Yes
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.

