

Safety Data Sheet



Section 1: Identification

Product identifier

Product Name

- **Mycodex All-In-One Flea & Tick Spray**

Synonyms

- 100504149; EPA Reg. No.: 2724-404-43591; Zoecon RF-322 Ovicidal Pump Spray

Product Description

- Pale yellow transparent liquid.

Relevant identified uses of the substance or mixture and uses advised against

Recommended use

- Insect growth regulator.

Restrictions on use

- **KEEP OUT OF THE REACH OF CHILDREN.** Avoid contact with eyes, skin and clothing. Do not use or store near heat or open flame.

Details of the supplier of the safety data sheet

Manufacturer

- Veterinary Products Laboratories
P.O. Box 34820
Phoenix, AZ 85067-4820
United States

www.vpl.com

Emergency telephone number

Manufacturer

- 1-888-241-9545

Manufacturer (Transportation)

- 1-800-424-9300 - CHEMTREC

Manufacturer (Transportation)

- 1-703-527-3887 - CHEMTREC - Outside North America Collect Calls Accepted

Section 2: Hazard Identification

United States (US)

According to: OSHA 29 CFR 1910.1200 HCS

Classification of the substance or mixture

OSHA HCS 2012

- Skin Sensitization 1
Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects
Eye Mild Irritation 2B
Flammable Liquids 3
Reproductive Toxicity 1B

Label elements

OSHA HCS 2012

DANGER



- Hazard statements** • May cause an allergic skin reaction
 May cause drowsiness or dizziness
 Flammable liquid and vapor.
 Causes eye irritation
 May damage fertility or the unborn child.

Precautionary statements

- Prevention** • Wash thoroughly after handling.
 Avoid breathing dust, fume, gas, mist, vapors and/or spray.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves/protective clothing/eye protection/face protection.
 Use only outdoors or in a well-ventilated area.
 Keep away from heat, sparks, open flames and/or hot surfaces. - No smoking.
 Keep container tightly closed.
 Ground and/or bond container and receiving equipment.
 Use explosion-proof - electrical, ventilating and/or lighting equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.

- Response** • IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical advice/attention.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 If skin irritation occurs: Get medical advice/attention.
 Take off contaminated clothing and wash before reuse.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor if you feel unwell.
 In case of fire: Use appropriate media water fog, alcohol resistant foam, dry chemical or CO₂ for extinction.
 IF exposed or concerned: Get medical advice/attention.

- Storage/Disposal** • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.
 Store in a well-ventilated place. Keep cool.
 Store locked up.

Other hazards

OSHA HCS 2012

- Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Section 3 - Composition/Information on Ingredients

Substances

- Material does not meet the criteria of a substance.

Mixtures

Composition		
Chemical Name	Identifiers	%
Pyrethrins	CAS:8003-34-7	0.2%

Piperonyl butoxide	CAS:51-03-6	0.46%
N-Octyl Bicycloheptene Dicarboximide	CAS:113-48-4	0.62%
(s)-Methoprene	CAS:65733-16-6	0.27%
2-Propanol, 1-methoxy	CAS:107-98-2	81.2% TO 82%
1-Propanol, 2-methoxy-	CAS:1589-47-5	< 0.41%
Other ingredients	NDA	Balance

Section 4: First-Aid Measures

Description of first aid measures

Inhalation

- IF INHALED: If breathing is difficult, remove person to fresh air and keep at rest in a position comfortable for breathing. Call a poison control center or doctor for further treatment advice.

Skin

- IF ON SKIN: Wash with plenty of soap and water. If irritation or rash occurs, get medical advice/attention.

Eye

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

- IF SWALLOWED: Call a POISON CONTROL center or doctor if you feel unwell. Rinse mouth. Do NOT induce vomiting unless directed by medical personnel.

Most important symptoms and effects, both acute and delayed

- May cause dizziness and/or drowsiness if inhaled, causes eye irritation, may cause an allergic skin reaction in individuals with a sensitivity to n-octyl bicycloheptene dicarboximide and/or piperonyl butoxide, may damage fertility or the unborn child. Refer to Section 11 - Toxicological Information.

Indication of any immediate medical attention and special treatment needed

Notes to Physician

- Treat symptomatically and supportively.

Section 5: Fire-Fighting Measures

Extinguishing media

Suitable Extinguishing Media • LARGE FIRES: Dry chemical, CO₂, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media

- Avoid heavy hose streams.

Firefighting Procedures

- Do not allow fire fighting water to escape into waterways or sewers.
LARGE FIRES: Dike fire control water for later disposal; do not scatter the material.
LARGE FIRES: Move containers from fire area if you can do it without risk.
Stay upwind.
Ventilate closed spaces before entering.
Do not breathe gas/fumes/vapor/spray.

Special hazards arising from the substance or mixture

Unusual Fire and Explosion

- Flammable liquid.

Hazards

Containers may explode when heated.
Liquid will float and may re-ignite on surface of water.

Hazardous Combustion Products

- Decomposes upon heating and may produce toxic vapors/gases.

Advice for firefighters

- Wear positive pressure self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

- Do not walk through spilled material. Ventilate enclosed areas. Wear appropriate personal protective equipment, avoid direct contact.

Emergency Procedures

- ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Ventilate closed spaces before entering. Avoid release into the environment.

Environmental precautions

- Avoid run off to waterways and sewers.

Methods and material for containment and cleaning up

Containment/Clean-up Measures

- Absorb spills with an inert material, clay granules or other inert absorbent material and put in container for disposal.
All equipment used when handling the product must be grounded.
LARGE SPILLS: Dike far ahead of spill for later disposal.
Stop leak if you can do it without risk.

Section 7 - Handling and Storage

Precautions for safe handling

Handling

- Keep away from fire - No Smoking. Avoid breathing fumes. Use only in well ventilated areas. Wear appropriate personal protective equipment, avoid direct contact.

Conditions for safe storage, including any incompatibilities

Storage

- Store locked up. Store in a cool/low-temperature, well-ventilated dry place away from heat and ignition sources. Keep from freezing. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F Keep container tightly closed.

Incompatible Materials or Ignition Sources

- Heat, sparks, open flame. Oxidizing agents.

Other Information

- See product label for additional information.

Section 8 - Exposure Controls/Personal Protection

Control parameters

Exposure Limits/Guidelines

- No data available.

Exposure Limits/Guidelines			
Result	ACGIH	NIOSH	OSHA

Pyrethrins (8003-34-7)	TWAs	5 mg/m3 TWA	5 mg/m3 TWA	5 mg/m3 TWA
2-Propanol, 1-methoxy (107-98-2)	STELs	100 ppm STEL	150 ppm STEL; 540 mg/m3 STEL	Not established
	TWAs	50 ppm TWA	100 ppm TWA; 360 mg/m3 TWA	Not established

Exposure Limits Supplemental

ACGIH

- Pyrethrins (8003-34-7): **TLV Basis - Critical Effects:** (liver damage; lower respiratory tract irritation)
- 2-Propanol, 1-methoxy (107-98-2): **TLV Basis - Critical Effects:** (eye and upper respiratory tract irritation)

Exposure controls

Engineering Measures/Controls

- Use adequate ventilation to remove vapors (fumes, dust, etc.)

Personal Protective Equipment

Pictograms



Respiratory

- In case of insufficient ventilation, wear suitable respiratory equipment. Not required with normal use. However, mixers, loaders, applicators and other handlers must wear respiratory protection with P or R filters.

Eye/Face

- Wear chemical splash safety goggles.

Hands

- Wear appropriate gloves.

Skin/Body

- If prolonged exposure is anticipated, it is recommended for handlers to wear appropriate clothing to prevent skin contact.

Environmental Exposure Controls

- Refer to Section 13 - Disposal Considerations.

Section 9 - Physical and Chemical Properties

Information on Physical and Chemical Properties

Material Description			
Physical Form	Liquid	Appearance/Description	Pale yellow transparent liquid.
Color	Pale yellow.	Odor	Characteristic of alcohol.
Odor Threshold	No data available		
General Properties			
Boiling Point	No data available	Melting Point/Freezing Point	No data available
Decomposition Temperature	No data available	pH	5.5 to 7.5
Specific Gravity/Relative Density	0.88 g/ml (7.3 lb.gal)	Density	No data available
Water Solubility	No data available	Viscosity	< 100 Centipoise (cPs, cP) or mPas
Critical Temperature	No data available		
Volatility			
Vapor Pressure	No data available	Vapor Density	No data available
Evaporation Rate	No data available		
Flammability			
Flash Point	41 °C(105.8 °F)	UEL	No data available

LEL	No data available	Autoignition	No data available
Flammability (solid, gas)	No data available		
Environmental			
Octanol/Water Partition coefficient	No data available		

Section 10: Stability and Reactivity

Reactivity

- Non-reactive under normal handling and storage conditions.

Chemical stability

- Stable

Possibility of hazardous reactions

- Hazardous polymerization will not occur.

Conditions to avoid

- Direct sunlight. Do not freeze. Excessive heat >110°F. Heat, sparks, open flame, other ignition sources, and oxidizing conditions.

Incompatible materials

- Store away from oxidizers.

Hazardous decomposition products

- Carbon dioxide and possibly carbon monoxide.

Section 11 - Toxicological Information

Information on toxicological effects

	CAS	
Mycodex All-In-One Flea & Tick Spray	NDA	Acute Toxicity: Ingestion/Oral-Rat LD50 • >5100 mg/kg; Skin-Rabbit LD50 • >2100 mg/kg; Irritation: Eye-Rabbit • Mild irritation; Skin-Rabbit • Essentially non-irritating

GHS Properties	Classification
Acute toxicity	OSHA HCS 2012 • Acute Toxicity - Dermal - Classification criteria not met; Acute Toxicity - Inhalation - Classification criteria not met; Acute Toxicity - Oral - Classification criteria not met
Skin corrosion/Irritation	OSHA HCS 2012 • Classification criteria not met
Serious eye damage/Irritation	OSHA HCS 2012 • Eye Mild Irritation 2B
Skin sensitization	OSHA HCS 2012 • Skin Sensitizer 1
Respiratory sensitization	OSHA HCS 2012 • Classification criteria not met
Aspiration Hazard	OSHA HCS 2012 • Classification criteria not met
Carcinogenicity	OSHA HCS 2012 • Classification criteria not met
Germ Cell Mutagenicity	OSHA HCS 2012 • Not classified - data lacking
Toxicity for Reproduction	OSHA HCS 2012 • Toxic to Reproduction 1B
STOT-SE	OSHA HCS 2012 • Specific Target Organ Toxicity Single Exposure 3: Narcotic Effects

STOT-RE

OSHA HCS 2012 • Classification criteria not met

Potential Health Effects

Inhalation

- Acute (Immediate)** • May cause drowsiness and dizziness.
- Chronic (Delayed)** • No data available

Skin

- Acute (Immediate)** • May cause an allergic reaction in individuals with a sensitivity to n-octyl bicycloheptene dicarboximide and/or piperonyl butoxide.
- Chronic (Delayed)** • No data available

Eye

- Acute (Immediate)** • May cause moderate irritation.
- Chronic (Delayed)** • No data available

Ingestion

- Acute (Immediate)** • Under normal conditions of use, no health effects are expected.
- Chronic (Delayed)** • No data available

Mutagenic Effects

- Methoprene has been tested and found negative for mutagenicity potential. n-octyl bicycloheptene dicarboximide was concluded to be negative in the CHO chromosome aberration assay. Piperonyl butoxide was not mutagenic in a battery of tests. Pyrethrins were not found to be genotoxic and did not damage DNA in any study conducted which included: Ames assay, chromosome aberration in Chinese hamster ovaries (CHO) cells and in the unscheduled DNA synthesis (UDS) assay in cultured human liver cells.

Carcinogenic Effects

- No component in this product present at 0.1% or greater is listed by IARC, OSHA or NTP.

Reproductive Effects

- Methoprene is not a teratogenic compound. The NOEL for maternal and embryotoxicity in rabbits was 200 mg/kg/day. The NOEL for reproductive effects in rats was 500 ppm. n-octyl bicycloheptene dicarboximide has been tested and is not a reproductive toxin. Piperonyl butoxide did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits. Pyrethrins did not produce any birth defects or adverse effects on reproductive parameters in tests with rats and rabbits. 2-methoxy-1-propanol has been shown to produce developmental toxicity in animals.

Section 12 - Ecological Information

Toxicity

Components		
Pyrethrins (0.2%)	8003-34-7	Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Rainbow trout</i> 0.0051 mg/L [Acute] NOEC <i>Sheepshead minnow</i> 0.0059 mg/L [estimated chronic] 96 Hour(s) LC50 <i>Sheepshead minnow</i> 0.016 mg/L [Acute] 96 Hour(s) NOEC <i>Fathead minnow</i> 0.0019 mg/L [Chronic] Aquatic Toxicity-Crustacea: 96 Hour(s) LC50 <i>Mysid Shrimp</i> 0.0014 mg/L [Acute] NOEC <i>Daphnia magna</i> 0.00086 mg/L [Chronic] NOEC <i>Mysid shrimp</i> 0.0001 mg/L [Estimated chronic] 48 Hour(s) LC50 Water Flea <i>Daphnia magna</i> 0.0116 mg/L [Acute]
		Aquatic Toxicity-Fish: LC50 <i>Rainbow Trout</i> 1.9 mg/L [Acute] LC50 <i>Sheephead minnow</i> 3.94 mg/L [Acute]

Piperonyl butoxide (0.46%)	51-03-6	NOEC <i>Fathead minnow</i> 0.04 mg/L [Chronic] Aquatic Toxicity-Crustacea: LC50 <i>Gammarus fasciatus (amphipod)</i> 0.51 mg/L [Acute] LC50 <i>Mysid shrimp</i> 0.49 mg/L [Acute] NOEC <i>Daphnia magna</i> 0.03 mg/L [Chronic]
N-Octyl Bicycloheptene Dicarboximide (0.62%)	113-48-4	Aquatic Toxicity-Fish: LC50 1.4-2.4 mg/L [Acute] Aquatic Toxicity-Crustacea: 48 Hour(s) LC50 <i>Daphnia magna</i> 2.3 mg/L [Acute]
(s)-Methoprene (0.27%)	65733-16-6	Aquatic Toxicity-Fish: 96 Hour(s) LC50 <i>Rainbow Trout</i> 0.76 mg/L [Acute] 96 Hour(s) LC50 <i>Blue Gill</i> >0.37 mg/L [Acute] NOEC <i>Fathead minnow</i> 0.048 mg/L [Chronic] Aquatic Toxicity-Crustacea: NOEC <i>Mysid shrimp</i> 0.014 mg/L [Chronic] 96 Hour(s) LC50 <i>Mysid shrimp</i> 0.11 mg/L [Acute] 48 Hour(s) LC50 <i>Daphnia magna</i> 0.36 mg/L [Acute]

Persistence and degradability

- (s)-Methoprene degrades rapidly in sunlight, both in water and on inert surfaces. The pesticide also is metabolized rapidly in soil and does not leach. Thus, it should not persist in soil or contaminate ground water. Pyrethrins have low persistence in the environment due to rapid breakdown in presence of UV light.

Bioaccumulative potential

- No data available.

Mobility in Soil

- (s)-Methoprene: 10-14 days, rapidly hydrolyzed in soil. Pyrethrins are relatively immobile in soil.

Other adverse effects

Potential Environmental Effects

- No data available.

Section 13 - Disposal Considerations

Waste treatment methods

Product waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. Do not empty into drains.

Packaging waste

- Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. See product label for disposal instructions.

Section 14 - Transport Information

	UN number	UN proper shipping name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	UN3092	Packaging 500 gal. or greater: 1-Methoxy-2-propanol solution	Comb. Liq.	III	RQ Pyrethrins = 1 lb.
IMO/IMDG	UN3092	1-Methoxy-2-propanol solution	3	III	Marine Pollutant
IATA/ICAO	UN3092	1-Methoxy-2-propanol solution	3	III	Not Applicable

Special precautions for user • None specified.

Transport in bulk according to Annex II of MARPOL 73/78 • No data available

and the IBC Code
Other information

- DOT** • Environmental Hazards: RQ (Pyrethrins = 1 lb).
- IMO/IMDG** • No data available
- IATA/CAO** • No data available

Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Hazard Classifications • SARA Title III Section 313, Acute

FIFRA – Pesticide Labeling

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

CAUTION

Precautionary Statements • KEEP OUT OF THE REACH OF CHILDREN.

Hazards to Humans and Domestic Animals

HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION: Harmful if swallowed or absorbed through the skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing.

First Aid •

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 eye. Call a Poison Control Center or doctor for treatment advice. If swallowed: Immediately call a Poison Control Center or doctor. Do not give any liquid to the person. Do not induce vomiting unless told to by a Poison Control Center or doctor. Do not give anything by mouth to an unconscious person. If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice. **NOTE TO PHYSICIAN:** Contains petroleum distillate - vomiting may cause aspiration pneumonia.

Environmental Hazards •

This product is toxic to aquatic organisms, including fish and invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollution Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

Physical or Chemical Hazards • Do not use or store near heat or open flame

Inventory		
Component	CAS	TSCA
(s)-Methoprene	65733-16-6	No
1-Propanol, 2-methoxy-	1589-47-5	Yes

2-Propanol, 1-methoxy	107-98-2	Yes
N-Octyl Bicycloheptene Dicarboximide	113-48-4	No
Piperonyl butoxide	51-03-6	Yes
Pyrethrins	8003-34-7	No

United States

Environment

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

• 1-Propanol, 2-methoxy-	1589-47-5	Not Listed
• (s)-Methoprene	65733-16-6	Not Listed
• Pyrethrins	8003-34-7	1 lb final RQ (listed under Pyrethrins); 0.454 kg final RQ (listed under Pyrethrins)
• 2-Propanol, 1-methoxy	107-98-2	Not Listed
• N-Octyl Bicycloheptene Dicarboximide	113-48-4	Not Listed
• Piperonyl butoxide	51-03-6	Not Listed

U.S. - CERCLA/SARA - Section 313 - Emission Reporting

• 1-Propanol, 2-methoxy-	1589-47-5	Not Listed
• (s)-Methoprene	65733-16-6	Not Listed
• Pyrethrins	8003-34-7	Not Listed
• 2-Propanol, 1-methoxy	107-98-2	Not Listed
• N-Octyl Bicycloheptene Dicarboximide	113-48-4	Not Listed
• Piperonyl butoxide	51-03-6	1.0 % de minimis concentration

Section 16 - Other Information

Revision Date • 17/March/2016

Last Revision Date • 17/March/2016

Preparation Date • 17/March/2016

Disclaimer/Statement of Liability •

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.