



EVOLUER™ 4-4 ULV

For use only by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

This product is Ready-To-Use, Quick Knockdown, Low Odor, Non-Corrosive Synergized Synthetic Pyrethroid for Control of Adult Mosquitoes, Biting and Non-Biting Midges, Black flies and other outdoor flying insects as listed on this label which cause Public Health annoyance in Residential, Municipal and Recreational Areas.

ACTIVE INGREDIENTS:

*Permethrin	4.0%
**Piperonyl Butoxide Technical	4.0%
OTHER INGREDIENTS***	92.0%
Total:	100.0%

*(3-phenoxyphenyl)methyl(+/-)-Cis/trans 3-(2,2-dichloroethyl)2,2-Dimethyl cyclopropanecarboxylate.
cis/trans ratio: min. 35% (+/-) cis and max. 65% (+/-) trans.

**Equivalent to 80% (butylcarbityl)(6-propylpiperonyl) ether and 20% related compounds.

*** Contains a petroleum distillate solvent

Contains 0.29 pounds of Permethrin and 0.29 pounds of Piperonyl Butoxide per gallon.

READ ENTIRE LABEL BEFORE USING READY-TO-USE

This product will not dilute with water.

EPA Reg. No 769-982 EPA Est. No. 44616-MO-1

KEEP OUT OF REACH OF CHILDREN CAUTION

“PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente” (If you do not understand the label, find someone to explain it to you in detail).

FIRST AID	
IF SWALLOWED:	Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so 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.
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 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.
IF INHALED:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further advice.
HOT LINE NUMBER:	Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also call 1-800-858-7378 for emergency medical treatment advice. See below for additional Precautionary Statements.
NOTE TO PHYSICIAN:	Solvent presents an aspiration hazard. Gastric lavage is indicated if material was taken internally. Vomiting may cause aspiration pneumonia.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS	
CAUTION: Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or the toilet. Prolonged or repeated skin contact may cause allergic reactions in some individuals. Remove contaminated clothing and wash before reuse.	

ENVIRONMENTAL HAZARDS	
This product is extremely toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.	
Bee Warning: This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply to blooming crops or weeds while bees are visiting the treatment areas, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.	

PHYSICAL AND CHEMICAL HAZARDS	
Do not use, pour, spill, or store near heat or open flame.	

DIRECTIONS FOR USE	
It is a violation of Federal law to use this product in a manner inconsistent with its labeling.	

WHEN TO APPLY

Note: Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

FOR BEST RESULTS treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the fog near the ground e.g. cool temperatures, and consistent wind speeds are not greater than 10 m.p.h. Apply when wind speed is greater or equal to 1 mph. Applications during the cool hours of night or early morning are usually preferable. Do not apply when air temperature is below 50° F.

Do not retreat the same site more than once in 12 hours. Do not apply more than 0.18 lbs. of permethrin per acre per year to any site. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

RATES CHART FOR Evoluer 4-4 ULV USE, UNDILUTED						
CONDITIONS AND RATES TO USE Evoluer 4-4 ULV UNDILUTED FOR MOSQUITO CONTROL						
Permethrin lbs. a.i./Acre	PBO lbs. a.i./Acre	Application Rates				Fluid Ounces and (milliliters) Per acre
		Fluid Ounces per Minute at MPH				
		5 mph	10 mph	15 mph	20 mph	
0.007	0.007	9.40	18.80	28.20	37.60	3.10 (91.7 ml)
0.0035	0.0035	4.70	9.40	14.10	18.80	1.55 (45.9 ml)
0.00175	0.00175	2.35	4.70	7.05	9.40	0.78 (22.9 ml)
0.001	0.001	1.34	2.69	4.03	5.37	0.44 (13.1 ml)

1 to 1 DILUTION RATES FOR Evoluer 4-4 ULV						
MIX 1 PART Evoluer 4-4 ULV WITH 1 PART OF A SUITABLE MINERAL OIL. APPLY AS FOLLOWS:						
Pounds a.i. per Acre		Application Rates				Fluid Ounces and (milliliters) Finished Spray
		Fluid Ounces per Minute at Vehicle Speeds				
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	Per acre
0.007	0.007	19.80	37.60	56.40	75.20	6.20 (183.3)
0.0035	0.0035	9.40	18.80	28.20	39.57	3.10 (91.7)
0.00175	0.00175	4.70	9.40	14.10	18.80	1.55 (45.9)
0.001	0.001	2.70	5.37	8.06	10.74	0.90 (26.6)

HOW TO APPLY

Ground Application: Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns (Dv 0.5 < 30 µm) and that 90% of the spray is contained in droplets smaller than 48 microns (Dv 0.9 < 48 µm). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser-based measurement instrument must be used to adjust equipment to product acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rates(s) are properly calibrated.

Aerial Application: Spray equipment must be adjusted so the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 µm) and that 90% of the spray is contained in droplets smaller than 115 microns (Dv 0.9 < 115 µm). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser-based measurement instrument must be used to adjust equipment to product acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rates(s) are properly calibrated.

For proper ground application mount the fog applicator so that the nozzle is at least 4 1/2 feet above the ground level and directed out the back of the vehicle. Failure to follow these label directions may result in reduced effectiveness. For Aerial Application refer to the "Aerial Application" section on this label. **AiPro EVOLUER 4-4 ULV** may be used as is, or diluted with a suitable solvent such as 60 to 100 Second viscosity mineral oil and applied at a rate not to exceed 3.10 fl. oz. of **AiPro EVOLUER 4-4 ULV** per acre. For exact rates, see the "Undiluted" or the "1 to 1 Dilution" rate charts on this label.

AiPro EVOLUER 4-4 ULV is recommended for application as an Ultra Low Volume (ULV) Thermal or Non-Thermal aerosol (cold fog) to control adult mosquitoes, and other insects as listed on this label, in residential and recreational areas where these insect pests become a problem; such as, but not limited to parks, campsites, woodlands, athletic fields, golf courses, residential areas, municipalities, gardens, playgrounds, and non-crop waste areas

AiPro EVOLUER 4-4 ULV can be applied over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present:

Almonds	Corn, fodder	Onions, dry bulb
Apples	Corn, forage	Peaches
Broccoli	Corn grain	Pears
Brussels sprouts	Eggplant	Peppers, bell
Cabbage	Range Grasses	Soybeans
Celery	Leafy Vegetables (except Brassica)	Tomatoes
Cauliflower	Lettuce, head	Vegetables, cucurbit
Cherries	Mushrooms	Walnuts

Do not allow spray treatment to drift on pastureland, cropland, (other than crops listed) or water supplies. In treatment of corrals, feedlots, animal confinements/houses, swine lots and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.

GROUND ULV NON-THERMAL AEROSOL (COLD FOG) APPLICATIONS

To control Mosquitoes, Midges and Black flies, apply **AiPro EVOLUER 4-4 ULV** using any standard ULV ground applicator capable of producing a non-thermal aerosol fog and base all acreage calculations on the equipment manufacturer's recommended swath width.

When applying this product undiluted, apply at a flow rate of 2.69 to 18.80 ounces per minute at an average vehicle speed of 10 mph. These rates are equivalent to 0.001 to 0.007 pound of permethrin a.i. and 0.001 to 0.007 pound of piperonyl butoxide a.i. per acre. If a different vehicle speed is used, adjust the rate accordingly. Vary flow rates accordingly to vegetation density and mosquito population. Use higher flow rates in heavy vegetation or when insect populations are high. An accurate flow rate control system must be used to ensure proper flow rate. **AiPro EVOLUER 4-4 ULV** may also be applied by diluting 1 part to 1 part of a 60 to 100 second mineral oil or another suitable solvent applies so as not to exceed the maximum a.i. rates per acre as shown in the rate charts. If an alternate dilution rate is required, adjust the flow rate accordingly, provided the droplet size and spectrum remain within the label specifications. Do not exceed a flow rate of 20 oz. per minute unless recommended by equipment manufacturers and/or Public Health Officials when undiluted or diluted 1 to 1, and high vehicle speeds of 10, 15 or 20 mph are necessary in emergency conditions, and when fogging equipment is capable of such higher rates of output per minute.

THERMAL AEROSOL FOGGING

TRUCK MOUNTED: Apply **AiPro EVOLUER 4-4 ULV** diluted or undiluted with suitable Thermal Fogging equipment. Droplet size of thermal "fog" will range 0.1 to 1.0 micron. If diluted use a 60 to 100 second viscosity mineral oil, or another suitable non-phytotoxic diluent, to reduce oil requirement and sludge buildup in equipment. Do not exceed the maximum rates. May be applied at speeds of 5 mph up to 20 mph.

HAND CARRIED and/or LAWN MOWER FOGGERS, use the same rates of a.i. per acre with a 50 foot swath width at a walking speed of 2 mph. Do not fog to wet foliage. Only use a clean, well maintained, and properly calibrated fogger, known to give excellent performance. Fog downwind. Apply **AiPro EVOLUER 4-4 ULV** to deliver 0.001 to 0.007 pound of permethrin a.i. per acre and 0.001 to 0.007 pound of piperonyl butoxide a.i. per acre.

USE AS AN INSECT BARRIER TREATMENT

For use in Non-Thermal ULV, motorized, portable backpack fog type mist blower equipment, apply **AiPro EVOLUER 4-4 ULV** with equipment adjusted to deliver ULV particles of 50 to 100 volume median diameter. **AiPro EVOLUER 4-4 ULV** may be applied undiluted or diluted (see application rate charts on this label). If diluted, use a 30 to 100 second viscosity mineral oil, or another (if recommended by Public Health Officials) suitable non-phytotoxic diluent. Use 0.001 to 0.007 pound of permethrin a.i. per acre at a 50 ft. (15.2 m) swath width while walking at a speed of 2 mph (3.2 kph). Whether applied undiluted or diluted, or at a different speed, make sure that the same amount (0.001 to 0.007 lb.) of permethrin a.i. and piperonyl butoxide a.i. is applied per acre.

When this product is applied as a barrier application using low pressure hand sprayers, hydraulic sprayers or ground ULV equipment, do not apply within 100 feet (30 meters) of lakes and streams.

AERIAL APPLICATION

Aerial application with ULTRA LOW VOLUMES of **AiPro EVOLUER 4-4 ULV** applied according to the rate charts on this label may be considered necessary when conducted at the discretion of Public Health Officials, Mosquito Abatement Districts, or other trained personnel engaged in outdoor Mosquito and flying insect control programs, when these insects threaten to become a public health hazard.

Aerial application of Aqualuer 20-20 shall be made at altitudes ranging from 100 feet to 300 feet. The recommended airspeed for Fixed Wing aircraft with flat fan nozzles is from 120 to 160 mph. For Rotary Aircraft equipped with rotary nozzles, apply at a sufficient airspeed to deliver the appropriate amount of **AiPro EVOLUER 4-4 ULV** a.i. per acre. Do not exceed 3.10 fluid ounces per acre of **AiPro EVOLUER 4-4 ULV** which is equal to 0.007 lb. permethrin a.i. per acre and 0.007 lb. piperonyl butoxide a.i. per acre.

PROHIBITION FOR AERIAL USE: Not for aerial application in the State of Florida unless specifically authorized by the Bureau of Entomology and Pest Control, Florida Department of Agriculture and Consumer Services.

STORAGE & DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage and Spill Procedures: Store in upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

Pesticide Disposal: Pesticide spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility.

Container Disposal: Triple rinse or equivalent, then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

READ ENTIRE LABEL BEFORE USING

Read the entire **Directions for Use, Conditions, Disclaimer of Warranties, and Limitation of Liability** before using this product. By using this product, User and Buyer accept the following Conditions, Disclaimer of Warranties and Limitations of Liability.

CONDITIONS: The Directions for Use of this product are believed to be adequate and should be followed carefully. However it is impossible to eliminate all risks associated with the use of this product. Injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of **Value Garden Supply**. All such risks shall be assumed by the User or Buyer.

DISCLAIMER OF WARRANTIES: To the extent provided by law, there are no warranties express or implied, of merchantability or of fitness for a particular purpose or otherwise, which extend beyond the statements made on this label. No agent of **Value Garden Supply** is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. **Value Garden Supply** disclaims any liability whatsoever for special, incidental, or consequential damages resulting from the use or handling of this product.

LIMITATION OF WARRANTIES: The exclusive remedy of the User or Buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price, or at **Value Garden Supply's** option, the replacement of the product.

EPA Reg. No 769-982
EPA Est. No. 44616-MO-1

Value Garden Supply
P.O. Box 585
St. Joseph, MO 64502
(952) 884-6477
www.allprovector.com
3/07

SPECIMEN LABEL



MATERIAL SAFETY DATA SHEET



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Evoluer 4-4 ULV
EPA REG. NUMBER: 769-982
PRODUCT NUMBER: 51020, 51021, 51022, 51023, 51024

MANUFACTURER: Value Garden Supply
ADDRESS: P.O. Box 585, St. Joseph, MO 64502
WEBSITE: www.allprovector.com

MANUFACTURER PHONE: (888) 603-1008
MANUFACTURER FAX PHONE: (952) 884-6149
EMERGENCY PHONE: (800) 858-7378

PRODUCT USE: For effective control of Adult Mosquitoes. For application by Public Health Officials and Trained Personnel of Mosquito Abatement Districts and Other Mosquito Control Programs.

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENTS*:</u>	<u>CAS NO.</u>	<u>% WT</u>	<u>OSHA TWA</u>	<u>OSHA STEL</u>	<u>ACGIH TWA</u>	<u>ACGIH STEL</u>
Permethrin:	52645-53-1	4.0%	N/A	NE	N/A	NE
Piperonyl Butoxide:	51-03-6	4.0%	N/A	NE	N/A	NE
White Mineral Oil	8042-47-50	<92.%	5mg/M3	N/A	5mg/M3	10mg/M3

* All ingredients in quantities > 1.0 % (0.1 % for carcinogens or teratogens) that are **potentially** hazardous per OSHA definitions

N/A = not applicable NE = not established

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Potential Health Effects

POTENTIAL HEALTH EFFECTS: Eye and skin contact, inhalation. Prolonged or frequent repeated skin contact with permethrin may cause allergic reaction in some individuals. Repeated and prolonged skin contact with piperonyl butoxide may cause skin irritation. This product may cause temporary eye irritation.

SYMPTOMS OF ACUTE EXPOSURE: Large, toxic doses of permethrin, administered to laboratory animals, have produced central nervous system effects with symptoms that include diarrhea, salivation, bloody nose, tremors and intermittent convulsions. Overexposure to permethrin via inhalation also produced hyperactivity and hypersensitivity.

CARCINOGENICITY: Permethrin: A statistically significant increase of lung and liver tumors was observed in female mice receiving diets containing 375 and 750 mg/Kg/day over 85 weeks. Piperonyl Butoxide: Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures. The significance of this observation is questionable and under review. The doses at which tumors were observed greatly exceeded human dietary intake. At anticipated dietary exposure levels, it is highly unlikely that piperonyl butoxide would result in carcinogenic effects. IARC has also concluded that there is no evidence for the carcinogenicity of white oils when administered by routes other than by interperitoneal injection. The solvent is not carcinogenic according to the OSHA Hazard Communication Standard.

SECTION 4: FIRST AID MEASURES

EYES: Immediately flush eyes with large amounts of water and continue flushing until irritation subsides. If irritation persists, seek medical attention (based on solvent).

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a Poison Control Center for treatment advice.

INGESTION: Immediately call a physician or Poison Control Center or doctor. Do not induce vomiting unless told by a poison control center or a doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.



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INHALATION: The solvent in this product has a low vapor pressure and is not expected to present an inhalation exposure hazard during mixing and loading. Follow directions for use on product packaging when applying this product.

NOTE TO PHYSICIAN: Contains petroleum distillate – vomiting may cause aspiration hazard

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY CLASSIFICATION: Non-flammable Liquid

FLASH POINT: 200°F

AUTOIGNITION TEMPERATURE: NE

EXTINGUISHING MEDIA: Use water fog, dry chemical, foam or CO2 extinguishing media.

SPECIAL FIRE FIGHTING PROCEDURES: Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area and equipment until decontaminated. Use as little water as possible to prevent spread of contaminated runoff.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NFPA HAZARD CLASSIFICATION:

	<u>HEALTH</u>	<u>FIRE</u>	<u>REACTIVITY</u>	<u>SPECIFIC</u>
Non-fire	1	0	0	N/A

NFPA HAZARD RATING CODES:

	<u>INSIGNIFICANT</u>	<u>SLIGHT</u>	<u>MODERATE</u>	<u>HIGH</u>	<u>EXTREME</u>
	0	1	2	3	4

SECTION 6: ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, to prevent contact with spilled material. For small spills, cover the spill with an absorbent material such as pet litter. Sweep up and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal the container and handle in an approved manner. Flush the area with water to remove any residue. Do not allow wash water to contaminate water supplies.

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store the material in a well-ventilated, secure area, out of the reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

The employee must wear protective clothing and related safety equipment. Good ventilation should be sufficient for most conditions. Positive pressure self contained breathing apparatus should be used for confined spaces and high exposure operations. The employee should shower at the end of the workday. The employee must wear clean clothes every day or after a spill if the clothes become contaminated. Always wash hands and face with soap and water prior to eating, drinking, smoking or using toilet facilities. It is best not to wear contact lenses but use safety prescription glasses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear Amber

VAPOR PRESSURE (mmHg): Solvent - <1 mm Hg @ 70°F



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ODOR: Slight solvent and licorice
PHYSICAL STATE: Liquid
BOILING POINT: NE
MELTING POINT: N/A
FREEZING POINT: N/A
WATER SOLUBILITY: Oil Solution will not mix in water

pH):: N/A
SPECIFIC GRAVITY: 0.8530
PERCENT VOLATILE BY VOLUME: Solvent 39%
VISCOSITY: 600 cps
AUTO IGNITION: N/A
OTHER SOLUBILITIES: NE

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable
INCOMPATIBILITY (MATERIAL TO AVOID): Flame, heat, ignition sources and strong oxidizers or reducing agents.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE ORAL EFFECTS: Oral LD50 (Rat): >500 to <5,000 mg./Kg. (female) >5,000 mg./Kg. (male)
ACUTE DERMAL EFFECTS: Dermal LD50 (Rat): >2,000 mg/Kg.
CARCINOGENICITY: Permethrin: A statistically significant increase of lung and liver tumors was observed in female mice receiving diets containing 375 and 750 mg/Kg/day over 85 weeks. Piperonyl Butoxide: Marginally higher incidences of benign liver tumors in mice were observed following lifetime high dose exposures. The significance of this observation is questionable and under review. The doses at which tumors were observed greatly exceeded human dietary intake. At anticipated dietary exposure levels, it is highly unlikely that piperonyl butoxide would result in carcinogenic effects. IARC has also concluded that there is no evidence for the carcinogenicity of white oils when administered by routes other than by interperitoneal injection. The solvent is not carcinogenic according to the OSHA Hazard Communication Standard.
EYE EFFECTS: Minimally irritating
INHALATION: 4-hour LC50 (Rat): >2.02 mg./L.
SKIN CONTACT: Non-irritating.
SKIN SENSITIZE: Permethrin is a skin sensitizer in some individuals.
MUTAGENIC POTENTIAL: Permethrin and Piperonyl Butoxide did not produce any mutagenic effects when tested in the Ames test.
REPRODUCTIVE HAZARD POTENTIAL: Permethrin and Piperonyl Butoxide were not teratogenic when tested in rats.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and/or carbon dioxide. Chlorine and hydrogen chloride may be formed.

SECTION 12: ECOLOGICAL INFORMATION

Permethrin and piperonyl butoxide are highly toxic to fish and other aquatic organisms. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark other than as instructed on the product label. Do not contaminate water by disposing of equipment washwater. Apply this product only as specified on the label.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Do not reuse product containers. Dispose of product containers, waste containers, and residues according to Federal, State and local health and environmental regulations.



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SECTION 14: TRANSPORT INFORMATION

*DOT HAZARD DESCRIPTION: Not Regulated

(*) U.S Department of Transportation

SECTION 15: REGULATORY INFORMATION

SARA TITLE III CLASSIFICATION:

Section 311/312: Acute Health Hazard – Yes

Chronic Health Hazard – Yes

Fire Hazard – No

Sudden release of pressure hazard – No

Reactivity hazard – No

Section 313 chemicals:

Permethrin (4%) (CAS # 52645-53-1)

Piperonyl Butoxide (4%) (CAS # 51-03-6)

TSCA STATUS: Exempt from TSCA

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III and of 40 CFR 372. Any copies or redistribution of this MSDS must include this notice.

INDIVIDUAL STATES: N/A

SECTION 16: OTHER INFORMATION

This information is provided in good faith, but without express or implied warranty. For additional information, refer to the American Conference of Governmental Industrial Hygienists (ACGIH) documentation of TLV's (Threshold Limit Values) for individual components and the DOT Emergency Response Guidebook.