

Aqua Perm-X™ UL 30-30

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.

CONTROLS: Adult Mosquitoes (including organophosphate-resistant mosquitoes), Midges (biting and non-biting) and Black Flies

FOR USE AS A: ULV, thermal and barrier applications using ground and aerial equipment in areas including: residential, industrial, commercial and within or adjacent to listed crops and range grasses.

Formulation allows for dilution with water or oil. Refer to label for additional use sites.

SPECIMEN LABEL

ACTIVE INGREDIENTS:

Permethrin (CAS# 52645-53-1)	30%
Piperonyl Butoxide (CAS# 51-03-6)	30%
OTHER INGREDIENTS*	40%
TOTAL:	100%

*Contains Petroleum Distillates
Contains 2.52 lbs. a.i. Permethrin per gallon and 2.52 lbs. a.i. Piperonyl Butoxide per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

See Additional Precautionary Statements, First Aid, Directions for Use including Storage and Disposal instructions.

For Chemical Spill, Leak, Fire, or Exposure,
Call: CHEMTREC 1-800-424-9300.
For Medical Emergencies Only, Call: 1-800-248-7763.

EPA Reg.No. 89459-76
EPA Est. No. 2724-TX-1

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wear long sleeved shirt, long pants, shoes, socks, and chemical-resistant gloves (barrier laminate, nitrile rubber, neoprene rubber, or viton, Selection Category E). Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

FIRST AID	
If swallowed	<ul style="list-style-type: none"> • 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.

(continued)

If on skin or clothing	<ul style="list-style-type: none"> • 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.
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 contact 1-800-248-7763 for emergency medical treatment information.	
NOTE TO PHYSICIAN: Contains petroleum distillate. May pose an aspiration pneumonia hazard.	

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, nitrile rubber, neoprene rubber, and viton. If you want more options, follow the instructions for category E on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeve shirt and long pants,
- Shoes plus socks,

- Chemical-resistant gloves for all handlers except for applicators using motorized ground equipment, pilots, and flaggers,
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment and persons exposed to concentrate.

See Engineering Controls for additional requirements.

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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

ENGINEERING CONTROLS

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to the use of the Global Positioning System (GPS) or mechanical flaggers.

USER SAFETY RECOMMENDATIONS

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to 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 this product or allow it to drift on blooming crops or weeds while bees are actively 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.

DIRECTIONS FOR USE

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

HOW TO APPLY AND WHERE TO USE

This product is designed for application as an Ultra-Low Volume (ULV) or thermal aerosol to control adult mosquitoes and flies of nuisance, public health or disease vector importance in areas including: residential areas, industrial areas, commercial areas, urban areas, parks, campgrounds, woodlands, athletic fields, golf courses, playgrounds, recreational areas, overgrown waste areas, roadsides, and other areas where adult mosquitoes and flies may be found.

Apply this product with ULV cold aerosol generators, thermal aerosol

generators, mist-blowers, backpack sprayers, or handheld sprayers. Mist-blowers, backpack sprayers, handheld sprayers and low-pressure hand sprayers may be used for barrier or surface applications.

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 mph. Applications during the cool hours of night or early morning are usually preferable. Apply this product only when wind speed is greater than 1 mph.

Do not retreat the same site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs. permethrin per acre per application or 0.25 lbs. PBO per acre per application, or 0.18 lbs. of permethrin per acre per season or 2 lbs. PBO per acre per year. When targeting *Aedes taeniorhynchus* and other difficult species, applications of PBO may be made up to 0.08 lbs. PBO per acre. 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.

Apply this product 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:

Alfalfa	Celery	Kiwifruit	Potatoes
Almonds	Cherries	Horseradish	Range grasses
Apples	Corn, fodder	Leafy vegetables (except <i>Brassica</i>)	Soybeans
Artichokes, globe	Corn, forage	Lettuce, head	Spinach
Asparagus	Corn, grain (field and pop)	Mushrooms	Tomatoes
Avocados	Corn, stover	Onions, dry bulb	Vegetables, cucurbit
Broccoli	Corn, sweet kernel + cob with husks removed	Peaches	Walnuts
Brussels sprouts	Eggplant	Pears	Watercress
Cabbage	Filberts	Peppers, bell	
Cauliflower	Garlic	Pistachios	

Do not allow spray treatment to drift on 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.

This product provides effective control of adult mosquitoes, black flies, gnats, biting and non-biting midges, stable flies, horse flies, deer flies, sheep flies, horn and heel flies, and nuisance flying insects such as house flies. Air temperatures should be greater than 50° F when conducting all types of applications.

Do not apply directly to sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur, except as directed by this label.

Not for use in outdoor residential misting systems. Not for use in metered release systems.

GROUND APPLICATION

Vehicle-Mounted ULV Cold Aerosol Generators (Cold Fog): Apply through non-thermal ULV application equipment and base all acreage calculations on the equipment manufacturer's recommended swath width. Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns ($D_{v,0.5} < 30 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 50 microns ($D_{v,0.9} < 50 \mu\text{m}$). 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 produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Apply at a rate not to exceed 0.007 lb. of permethrin per acre. An optimum swath is created when this product is applied from a truck being driven perpendicular to the wind direction. Direct the spray head of the equipment to ensure an optimum distribution of the spray cloud throughout the area. For best results, apply when insects are most active and meteorological conditions are conducive to keeping the spray cloud near the ground. An inversion of air temperatures and a light breeze of approximately 1 to 3 mph are preferable. During applications, consistent ground wind speeds should not exceed 10 mph. Application of this product during cooler hours of the night or early morning is recommended.

This product may be applied through all ULV Cold Aerosol Generators, or other similar equipment designed for non-thermal ULV aerosol applications. The desired application rate may be obtained from the chart below or by altering the dilution rate, the flow rate of the insecticide from the application equipment and the vehicle speed. Some examples are provided in the following chart. When an alternate rate is required, adjust the flow rate accordingly, provided the droplet size and spectrum remain within the label specifications

FLOW RATE (Fluid Ounces Per Minute)						
Dilutions Based on a 15-Gallon Tank*						
Application Rate (Pounds of Permethrin a.i./Acre)	Vehicle Speed (MPH)	Undiluted	Diluted 1:4	Diluted 1:5	Diluted 1:6:5	Diluted 1:9
0.00150	10	0.46	2.32	2.77	3.50	4.70
	15	0.70	3.47	4.15	5.20	7.00
	20	0.93	4.64	5.60	7.00	9.30
0.00175	10	0.55	2.70	3.24	4.05	5.40
	15	0.82	4.05	4.84	6.07	8.10
	20	1.09	5.40	6.48	8.10	10.80
0.00350	10	1.09	5.40	6.48	8.10	10.80
	15	1.65	8.10	9.68	12.10	16.10
	20	2.19	10.80	12.90	16.10	21.50
0.00700	10	2.19	10.70	12.90	16.10	21.50
	15	3.28	16.10	19.40	24.20	
	20	4.38	21.40	25.80		

*Dilution Instructions: Fill tank with the appropriate amount of water for the desired dilution, then add this product and mix well. The use of metering pumps, injector systems or other mixing systems is optional. Note: When using oil as a diluent, agitate well before use.

Where dense vegetation is present, use higher rates of application and/or a slower speed for best results.

BACKPACK OR HANDHELD SPRAYER APPLICATION: Apply through non-thermal ULV application equipment and base acreage calculations on a 300 foot swath. To apply undiluted at 0.007 lb. of permethrin per acre, adjust

equipment to an output rate of 0.86 fluid ounces per minute and walk at 4 mph. To apply 0.0035 lb. of permethrin per acre, dilute 1 part of this product with 6 parts of diluent and apply at a rate of 3 fluid ounces per minute and walk at 4 mph.

THERMAL AEROSOL APPLICATION: For use in truck-mounted, handheld or other thermal fogging equipment. Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns ($D_{v,0.5} < 30 \mu\text{m}$) and that 90% of the spray is contained in droplets smaller than 48 microns ($D_{v,0.9} < 48 \mu\text{m}$). 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 produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated. Apply this product mixed with water or oil at a rate not to exceed 0.007 lb. per acre. Base acreage calculations on a 300 foot swath. For best results, direct the thermal fog into and allow to drift through areas where adult mosquitoes are found.

BARRIER APPLICATIONS: To control resting or flying adult mosquitoes in areas including animal quarters, roadsides, urban areas, residential areas, commercial areas, industrial areas, golf courses, parks, recreational areas, tire piles and all public areas where adult mosquitoes occur or find harborage. May be used to treat aggregation and harborage areas such as the perimeter of residential buildings, commercial buildings, storage buildings, crawlspaces, transport trailers, abandoned or uninhabited buildings and other areas where adult mosquitoes find harborage.

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.

To apply this product using low pressure hand sprayers or other similar equipment, for the control of mosquitoes on resting or aggregation surfaces, mix 0.0875 fluid ounces (2.59 ml) in one gallon of water and apply sufficient spray to dampen the surface – approximately 700-750 square feet of treated area. Use equipment that is capable of delivering an even distribution of the labeled rate over the treatment area. For application using backpack or truck-mounted mist-blower equipment, apply this product undiluted at a rate not to exceed 5.08 fluid ounces per acre. If diluted, apply at a rate not to exceed 0.1 lb. permethrin a.i. per acre. Diluted or undiluted applications may be made onto foliage at the perimeter of areas such as recreational areas, parks, or golf courses from which mosquitoes or flies are to be excluded. Applications may be directed into harborage areas or other resting areas where adult mosquitoes or flies may be found.

URBAN ULV MOSQUITO CONTROL APPLICATIONS: For control of resting or flying adult mosquitoes, biting flies and biting midges in harborage areas such as but not limited to utility tunnels, sewers, storm drains and catch basins, pipe tunnels, basements, underground passages, parking decks, crawlspaces under buildings, abandoned buildings or uninhabited buildings. Apply this product, diluted or undiluted, using mechanical foggers, handheld or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this type of application. This product may be applied at rates up to but not exceeding 0.007 lb. permethrin per acre.

AERIAL APPLICATION

Apply this product, either diluted or undiluted, at rates up to 0.007 lb. permethrin/PBO per acre by fixed wing or rotary aircraft equipped with a spraying system capable of making a ULV application. For aerial applications of this product, use ULV equipment and nozzles such as rotary atomizers or similar spray equipment. Spray equipment must be adjusted so the volume median diameter produced is less than 60 microns ($D_{v,0.5} < 60 \mu\text{m}$) and that

90% of the spray is contained in droplets smaller than 115 microns ($D_{v,0.9} < 115 \mu\text{m}$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

Aerial application of this product shall be made at altitudes ranging from 75 feet to 300 feet. Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs. Do not apply when ground wind speed exceeds 10 mph. Aerial applications of this product shall only be made when recommended by public health officials and trained personnel of mosquito abatement districts and other mosquito control programs.

For best results, apply this product when insects are most active and meteorological conditions are conducive to keeping the spray cloud near the ground. Aerial applications using aircraft equipped with global positioning systems (GPS) may be needed to compensate for windy conditions and to ensure drift into target areas.

IN FLORIDA: Do not apply by aircraft unless approved by the Florida Department of Agriculture and Consumer Services.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store 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: Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying.

(Containers ≤ 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

(Containers > 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Central Garden & Pet Company or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Central Garden & Pet Company and Seller harmless for any claims relating to such factors.

Central Garden & Pet Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Central Garden & Pet Company, and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, CENTRAL GARDEN & PET COMPANY MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall Central Garden & Pet Company or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. To the extent consistent with applicable law, **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF CENTRAL GARDEN & PET COMPANY AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF CENTRAL GARDEN & PET COMPANY OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Central Garden & Pet Company and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Central Garden & Pet Company.

Central Garden & Pet Company, 1501 East Woodfield Road, 200W, Schaumburg, Illinois 60173

NOTE: This specimen label is for informational purposes only. All uses may not be approved in all states. See product labeling for use directions. Perm-X is a trademark of Wellmark International. © 2015 Wellmark International.

SECTION 1: Identification

1.1. Identification

Product form : Mixtures
 Trade name : Aqua Perm-X UL 30-30
 Synonyms : 100209041, EPA Reg. No.: 89459-76, Prentox Perm-X UL 30-30

1.2. Recommended use and restrictions on use

Recommended use : Pesticide.
 Restrictions on use : Keep out of reach of children, Avoid contact with eyes and clothing, Do NOT take internally, Use only outdoors or in a well-ventilated area, Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

1.3. Supplier

Central Garden & Pet Company
 1501 E. Woodfield Road, Suite 200W
 Schaumburg, IL 60173 - United States

1.4. Emergency telephone number

Emergency number : 1-800-248-7763
 1-800-424-9300 - CHEMTREC
 1-703-527-3887 - CHEMTREC - Outside North America - Collect Calls Accepted

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Serious eye damage/eye irritation Category 2A	Causes serious eye irritation
Skin sensitization, Category 1	May cause an allergic skin reaction
Aspiration hazard Category 1	May be fatal if swallowed and enters airways
Carcinogenicity Category 2	Suspected of causing cancer
Acute toxicity (oral) Category 4	Harmful if swallowed
Acute toxicity (inhalation) Category 4	Harmful if inhaled
Specific target organ toxicity (single exposure) Category 1	Causes damage to organs

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

GHS08

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

Harmful if swallowed or if inhaled
 May be fatal if swallowed and enters airways
 May cause an allergic skin reaction
 Causes serious eye irritation
 Suspected of causing cancer
 Causes damage to organs

Precautionary statements (GHS-US) :

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Do not breathe dust/fume/gas/mist/vapors/spray
 Avoid breathing dust/fume/gas/mist/vapors/spray
 Wash hands, forearms and face thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing must not be allowed out of the workplace
 Wear protective gloves/protective clothing/eye protection/face protection
 If swallowed: Immediately call poison center or doctor

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If on skin: Wash with plenty of water
If inhaled: Remove person to fresh air and keep comfortable for breathing
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If exposed: Call a poison center/doctor
If exposed or concerned: Get medical advice/attention
Call poison center or doctor if you feel unwell
Rinse mouth
Do NOT induce vomiting
If skin irritation or rash occurs: Get medical advice/attention
If eye irritation persists: Get medical advice/attention
Wash contaminated clothing before reuse
Store locked up
Dispose of contents/container to in accordance with local/regional/national/international regulations

2.3. Other hazards which do not result in classification

Other hazards not contributing to the classification : This product is extremely toxic to fish and aquatic vertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Permethrin	(CAS-No.) 52645-53-1	30
Piperonyl butoxide	(CAS-No.) 51-03-6	30
Distillates (petroleum), hydrotreated light	(CAS-No.) 64742-47-8	14
Naphthalene	(CAS-No.) 91-20-3	0.1
Other ingredients	(CAS-No.) N/A	Balance

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact : IF ON SKIN: Wash with plenty of soap and water. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : 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 and attention.

First-aid measures after ingestion : IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Call a physician immediately. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : Harmful if inhaled. Permethrin effects the nervous system.

Symptoms/effects after skin contact : May cause an allergic skin reaction.

Symptoms/effects after eye contact : Irritation to eyes.

Symptoms/effects after ingestion : Risk of lung edema. Harmful if swallowed. Permethrin effects the nervous system.

4.3. Immediate medical attention and special treatment, if necessary

Contains petroleum distillate vomiting may cause aspiration pneumonia. Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Avoid heavy hose streams.

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5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Do not allow fire fighting water to escape into waterways or sewers.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Do NOT wash away into sewer. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Absorb spills with an inert material, clay granules or other inert absorbent material and put in container for disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool. Keep only in original container. Keep container tightly closed.

Incompatible products : Oxidizing agent. Strong acids. Strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Naphthalene (91-20-3)		
ACGIH	ACGIH TWA (ppm)	10 ppm
OSHA	OSHA PEL (TWA) (mg/m ³)	50 mg/m ³
OSHA	OSHA PEL (TWA) (ppm)	10 ppm
IDLH	US IDLH (ppm)	250 ppm
NIOSH	NIOSH REL (TWA) (mg/m ³)	50 mg/m ³
NIOSH	NIOSH REL (TWA) (ppm)	10 ppm
NIOSH	NIOSH REL (STEL) (mg/m ³)	75 mg/m ³
NIOSH	NIOSH REL (STEL) (ppm)	15 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values.

Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

See product label for specific use PPE instructions.

Materials for protective clothing:

It is recommended for handlers to wear appropriate clothing to prevent skin contact including long sleeves, long pants, socks and shoes.

Hand protection:

Wear chemical resistant gloves. Barrier laminate, nitrile rubber, neoprene rubber or Viton are recommended.

Eye protection:

Chemical goggles or face shield.

Respiratory protection:

In case of inadequate ventilation, avoid breathing vapors or mist, wear a NIOSH approved chemical cartridge respirator with organic vapor cartridges and a pesticide pre-filter.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear amber liquid.
Color	: amber
Odor	: Solvent.
Odor threshold	: No data available
pH	: 6.25 25 °C (1% aq solution)
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 231 °F (> 110.5556° C)
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 1.01 g/mL 8.47 lb/gal
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: Not explosive
Oxidizing properties	: Not applicable

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Aqua Perm-X UL 30-30	
ATE (Oral)	1335 mg/kg
ATE (Dust/Mist)	3.46 mg/l/4h
pH	6.25 25 °C (1% aq solution)

Permethrin (52645-53-1)	
LD50 oral rat	500 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	2.65 mg/l/4h

Piperonyl butoxide (51-03-6)	
LD50 oral rat	4300 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5 mg/l/4h

Distillates (petroleum), hydrotreated light (64742-47-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
LC50 inhalation rat (mg/l)	5 mg/l/4h

Naphthalene (91-20-3)	
LD50 oral rat	490 - 2600 mg/kg
LD50 dermal rabbit	> 2000
LD50 dermal	> 2000 mg/kg
IARC group	2B - Possibly Carcinogenic to Humans
National Toxicity Program (NTP) Status	Evidence of Carcinogenicity, Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list?	Yes

GHS-US Properties	Classification
Acute toxicity	Oral: Harmful if swallowed. Inhalation: Harmful if inhaled.
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cells mutagen	Not classified
Carcinogenicity	Suspected of causing cancer.
Reproductive toxicity	Not classified
Specific target organ toxicant (single exposure)	Causes damage to organs.
Specific target organ toxicant (repeated exposure)	Not classified
Aspiration hazard	May be fatal if swallowed and enters airways.

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Potential health effects

Inhalation

Acute : Harmful if inhaled. Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity.

Skin

Acute : May cause an allergic reaction in individuals with a sensitivity to piperonyl butoxide.

Eye

Acute : Causes serious eye irritation.

Ingestion

Acute : Aspiration hazard - small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema, Harmful if swallowed, Permethrin affects nervous system. Symptoms of overexposure to permethrin include diarrhea, salivation, tremors, convulsions, hyperactivity and hypersensitivity.

Mutagenicity : Permethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo tests, Piperonyl butoxide was not mutagenic in a battery of tests.

Carcinogenicity : Permethrin is not classified as carcinogen by NTP, IARC and OSHA, Piperonyl butoxide is not classified as carcinogen by NTP, IARC and OSHA, Naphthalene is listed as a suspected human carcinogen by NTP and IARC.

SECTION 12: Ecological information

12.1. Toxicity

Permethrin (52645-53-1)	
LC50 Acute fish 1	0.00079 mg/l Exposure time: 96h - Blue gill
LC50 Acute fish 2	0.0022 mg/l Exposure time: 96h - Atlantic silverside
LC50 Acute crustacea 1	0.000019 mg/l (Exposure time: 96h - Mysid shrimp)
NOEC Chronic fish 1	0.0003 mg/l Fathead minnow
NOEC Chronic fish 2	0.00083 mg/l Sheepshead minnow
NOEC Chronic crustacea 1	0.000039 mg/l Daphnia magna
NOEC Chronic crustacea 2	0.000011 mg/l Mysid shrimp
Piperonyl butoxide (51-03-6)	
LC50 Acute fish 1	1.9 mg/l (Exposure time: na - Rainbow trout)
LC50 Acute fish 2	3.94 mg/l (Exposure time: na - Sheepshead minnow)
LC50 Acute crustacea 1	0.49 mg/l (Exposure time: na - Mysid shrimp)
LC50 Acute crustacea 2	0.51 mg/l (Exposure time: na - Gammarus fasciatus (amphipod))
NOEC Chronic fish 1	0.04 mg/l (Fathead minnow)
NOEC Chronic crustacea 1	0.03 mg/l (Daphnia magna)
Naphthalene (91-20-3)	
LC50 Acute fish 1	5.74 - 6.44 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 Acute fish 2	1.6 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
LC50 Acute fish 3	0.91 - 2.82 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	2.16 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Daphnia 2	1.96 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Permethrin (52645-53-1)	
Log Pow	6.5
Piperonyl butoxide (51-03-6)	
Log Kow	4.75
Naphthalene (91-20-3)	
BCF fish 1	30 - 430
Log Pow	3.6
Log Kow	3.3

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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

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Ecological Fate

This product is extremely toxic to aquatic organisms, including fish and invertebrates. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

SECTION 14: Transport information

	UN number	Proper Shipping Name	Transport hazard class(es)	Packing group	Environmental hazards
DOT	Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
IMDG	UN3082	Packaging 5 L or greater: Environmentally Hazardous Substance, liquid, n.o.s. (Permethrin)	9	III	Marine pollutant
IATA	UN3082	Packaging 5 L or greater: Environmentally Hazardous Substance, liquid, n.o.s. (Permethrin)	9	III	Acute aquatic toxicity

SECTION 15: Regulatory information

15.1. US Federal regulations

Permethrin (52645-53-1)

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting 1 %

Piperonyl butoxide (51-03-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on SARA Section 313 (Specific toxic chemical listings)

SARA Section 313 - Emission Reporting 1 %

Distillates (petroleum), hydrotreated light (64742-47-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Naphthalene (91-20-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Listed on SARA Section 313 (Specific toxic chemical listings)

CERCLA RQ 100 lb

SARA Section 313 - Emission Reporting 0.1 %

FIFRA Labelling

EPA Registration Number 89459-76

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.

FIFRA Signal Word **Caution**

FIFRA Hazard Statement **KEEP OUT OF REACH OF CHILDREN.**

FIFRA Hazards to Humans and Domestic Animals Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wear long sleeved shirt, long pants, shoes, socks, and chemical-resistant gloves (barrier laminate, nitrile rubber, neoprene rubber, or viton, Selection Category E). Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

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FIFRA First Aid	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. 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. May pose an aspiration pneumonia hazard.
FIFRA Environmental Hazards	This pesticide is extremely toxic to 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, 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 this product or allow it to drift on blooming crops or weeds while bees are actively 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.

15.2. US State regulations

Naphthalene (91-20-3)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)
Yes	No	No	No	5.8 µg/day

SECTION 16: Other information

Date of issue : 03 May 2017
Supersedes : 24 April 2015

SDS US (GHS HazCom 2012) - CGP

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.