

PermaSease™ 30-30

For use as a spray by air and ground application to control adult mosquitoes, biting and non-biting midges, gnats, and black flies.

For use by federal, state, tribal, or local governmental 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.

A synergized permethrin formulation that provides quick knockdown and effective control of mosquitoes, black flies, gnats, biting and non-biting midges, as well as other biting flies in residential, recreational, urban, rural, and agricultural areas where mosquitoes and flies are found.

- ULV application provides excellent control at rates from 0.001 up to 0.007 pounds permethrin per acre.
- May be applied undiluted or diluted.

ACTIVE INGREDIENTS:

| | |
|---|--------|
| Permethrin: (3-phenoxyphenyl) methyl (+/-) Cis/trans 3-(2,2-dichloroethenyl) | |
| 2,2-Dimethyl-cyclopropanecarboxylate: | 30.0% |
| Piperonyl Butoxide* : | 30.0% |
| OTHER INGREDIENTS**: | 40.0% |
| TOTAL: | 100.0% |

*(butylcarbityl)(6-propylpiperonyl) ether and related compounds

**Contains Petroleum Distillate

Contains 2.5 lbs. A.I. Permethrin per gallon and 2.5 lbs. A.I. Piperonyl Butoxide per gallon

KEEP OUT OF REACH OF CHILDREN CAUTION

See Inside Attached Booklet for Additional Precautionary Statements.

PRECAUCION AL USUARIO: Si usted no lee inglés, no use este producto hasta que la etiqueta haya sido explicado ampliamente.

(To the User: If you cannot read English, do not use this product until the label has been fully explained to you.)

| FIRST AID | |
|--|--|
| IF SWALLOWED: | Call a poison control center or doctor for treatment advice. 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 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 treatment advice. |
| HOTLINE 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 SafetyCall® International (866) 897-8050 for emergency medical treatment information. | |
| Note to Physician: Contains petroleum distillate-vomiting may cause aspiration hazard. | |



PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

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

Environmental Hazards

This pesticide 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.

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.

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.

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 to blooming crops or weeds while bees are actively visiting the area, 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 Federal law to use this product in a manner inconsistent with its labeling.

While using or handling this product wear long sleeved shirt and long pants, socks, and shoes.

Conditions and Rates to Use for Mosquito Control

PermaSease™ 30-30 is recommended for application as an Ultra-Low Volume (ULV) Thermal or Non-thermal aerosol (cold fog) For best results, treat when insects are most active and conditions are conducive to keeping the fog in the air column close to the ground, (e.g. cool temperatures of the evening, night or early morning, and wind).

Do not apply more than 0.007 lb. ai/A per day. Do not apply more than 0.18 lb. ai/A per year. 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 diseases in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort. Apply when wind speed is greater than or equal to 1 mph.

Spray Drift Management for Wide Area Mosquito Abatement

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Both ground and aerial applications should be made when meteorological conditions are conducive to keeping the spray cloud close to the ground, such as when an air temperature inversion is present. Applications during the cool hours of early morning or evening are preferable. Air temperatures should be greater than 50° F when conducting all types of applications. Application in calm air conditions is to be avoided. Apply when wind speed is greater than 1 mph.

PermaSease™ 30-30 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 be made where the following crops are present:

| | |
|--|------------------------------------|
| Alfalfa | Filbert |
| Almonds | Garlic |
| Apples | Horseradish |
| Artichoke, globe | Leafy vegetables (except Brassica) |
| Asparagus | Lettuce, head |
| Avocado | Mushrooms |
| Broccoli | Onion, dry bulb |
| Brussels sprouts | Peaches |
| Cabbage | Pears |
| Cauliflower | Pepper, bell |
| Celery | Pistachio |
| Cherries | Potato |
| Corn, sweet kernel plus cob with husks removed | Range grasses |
| Corn, fodder | Soybeans |
| Corn, forage | Spinach |
| Corn, grain (field and pop) | Tomatoes |
| Corn, stover | Vegetable, cucurbits |
| Eggplant | Walnuts |

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

GROUND APPLICATION INSTRUCTIONS

Droplet Size Calibration for Ground Application Equipment

For ground-based application spray equipment must be adjusted so that the volume median diameter is less than 30 microns ($Dv\ 0.5 < 30\mu m$) and that 90% of the spray is contained in droplets smaller than 50 microns ($Dv\ 0.9 < 50\ \mu m$). Directions from the equipment manufacturer or vendor, or 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.

ULV Non-Thermal Aerosol (Cold Fog)

To control adult mosquitoes, midges, gnats, and black flies apply **PermaSease™ 30-30** diluted or undiluted using any standard ULV ground applicator capable of producing the required droplet spectrum. Apply the product to deliver 0.001 to 0.007 lb. permethrin per acre. Under normal conditions a 300ft swath width is recommended but in dense vegetation, high mosquito populations, or open areas the swath width can be adjusted accordingly to establish the proper flow rates. See Rate Charts below for some suggested application rates for ground ULV applications based on a 300 ft swath width.

When applying this product undiluted, apply at a flow rate of 0.31 to 2.17 ounces per minute at an average vehicle speed of 10 mph. These rates are equivalent to 0.001 to 0.007 pound of permethrin and 0.001 to 0.007 pounds of piperonyl butoxide per acre with an assumed 300ft swath width. If a different vehicle speed or swath width is used, adjust the rate accordingly to achieve a rate between 0.001 and 0.007 lbs. of permethrin per acre. Vary flow rates accordingly to vegetation density and mosquito population. Use of the maximum flow rates and application rates listed on this label is recommended to treat heavy vegetation or when target insect populations are high. An accurate flow rate control system must be used to ensure proper flow rate. For optimum ground application performance, apply at speeds of 5 to 20 mph.

Flowrate Chart for PermaSease™ 30-30

PermaSease™ 30-30 may also be applied by diluting with a light mineral oil or suitable solvent, applied so as not to exceed 0.007 lbs. of permethrin per acre. If an alternate dilution rate is required, adjust the flow rate, accordingly, provided the droplet size and spectrum remain within label specifications.

| Ground Application Rate Chart– For Use of PermaSease™ 30-30 | | | | | | | |
|---|---------------------|-----------|-------------|-------------|-------------|-------------|-------------|
| Application Rate (lbs. permethrin/acre) | Vehicle Speed (mph) | Undiluted | Diluted 1+1 | Diluted 1+2 | Diluted 1+3 | Diluted 1+4 | Diluted 1+8 |
| 0.001 | 5 | 0.16 | 0.31 | 0.47 | 0.62 | 0.78 | 1.40 |
| | 10 | 0.31 | 0.62 | 0.93 | 1.24 | 1.55 | 2.79 |
| | 15 | 0.47 | 0.93 | 1.40 | 1.86 | 2.33 | 4.19 |
| | 20 | 0.62 | 1.24 | 1.86 | 2.48 | 3.10 | 5.59 |
| 0.00175 | 5 | 0.27 | 0.54 | 0.81 | 1.09 | 1.36 | 2.44 |
| | 10 | 0.54 | 1.09 | 1.63 | 2.17 | 2.72 | 4.89 |
| | 15 | 0.81 | 1.63 | 2.44 | 3.26 | 4.07 | 7.33 |
| | 20 | 1.09 | 2.17 | 3.26 | 4.34 | 5.43 | 9.77 |
| 0.0025 | 5 | 0.39 | 0.78 | 1.16 | 1.55 | 1.94 | 3.49 |
| | 10 | 0.78 | 1.55 | 2.33 | 3.10 | 3.88 | 6.98 |
| | 15 | 1.16 | 2.33 | 3.49 | 4.65 | 5.82 | 10.47 |
| | 20 | 1.55 | 3.10 | 4.65 | 6.21 | 7.76 | 13.96 |
| 0.0035 | 5 | 0.54 | 1.09 | 1.63 | 2.17 | 2.72 | 4.89 |
| | 10 | 1.09 | 2.17 | 3.26 | 4.34 | 5.43 | 9.77 |
| | 15 | 1.63 | 3.26 | 4.89 | 6.52 | 8.15 | 14.66 |
| | 20 | 2.17 | 4.34 | 6.52 | 8.69 | 10.86 | 19.55 |
| 0.005 | 5 | 0.78 | 1.55 | 2.33 | 3.10 | 3.88 | 6.98 |
| | 10 | 1.55 | 3.10 | 4.65 | 6.21 | 7.76 | 13.96 |
| | 15 | 2.33 | 4.65 | 6.98 | 9.31 | 11.64 | 20.95 |
| | 20 | 3.10 | 6.21 | 9.31 | 12.41 | 15.52 | 27.93 |
| 0.007 | 5 | 1.09 | 2.17 | 3.26 | 4.31 | 5.43 | 9.77 |
| | 10 | 2.17 | 4.34 | 6.52 | 8.69 | 10.86 | 19.55 |
| | 15 | 3.26 | 6.52 | 9.77 | 13.03 | 16.29 | 29.32 |
| | 20 | 4.34 | 8.69 | 13.03 | 17.38 | 21.72 | 39.10 |

Thermal Aerosol Fogging

Apply **PermaSease™ 30-30** diluted or undiluted with suitable Thermal Fogging equipment such as vehicle mounted or handheld thermal fog generators capable of making thermal fog applications. Use only well maintained and properly calibrated thermal fogging equipment to ensure optimum performance and effectiveness. If diluted, use a light mineral oil, or another suitable non-phytotoxic diluent, to reduce oil requirement and sludge buildup in equipment. Do not exceed the maximum rate of 0.007 lbs. of permethrin per acre. Apply **PermaSease™ 30-30** to deliver 0.001 to 0.007 lb. a.i. per acre. Droplet size of thermal fog will be very small usually in the 0.5 to 1.0 micron range. For best results, fog downwind by directing thermal fog into the air and allowing it to drift through areas with active mosquitoes or where mosquitoes find harborage. Do not thermal fog when winds exceed 10 mph. Do not fog wet foliage.

Vehicle Mounted: May be applied with vehicle mounted sprayers at speeds of 5 to 20 mph using a treatment swath width of 300 ft.

Portable or Hand Carried: For use with hand carried and/or portable thermal foggers, use a walking speed of 2 mph and a 50-foot swath.

Use as An Insect Barrier Treatment

For use in Non-Thermal ULV, motorized, portable, backpack, handheld, or vehicle mounted fogging equipment or fog type mist blower equipment, apply **PermaSease™ 30-30** with equipment adjusted to deliver ULV particles of 50 to 120 microns volume median diameter. **PermaSease™ 30-30** may be applied undiluted or diluted. If diluted, use a light mineral oil, or another suitable non-phytotoxic diluent. Do not apply more than 0.007 lbs. of permethrin per acre using an appropriate swath width based

on the capabilities of your equipment, typically a 50 ft swath width is used. Direct spray onto foliage at the perimeter of areas from which mosquitoes or flies are to be excluded or direct spray into harborage areas where adult mosquitoes or flies may be found. May be used to treat aggregation and harborage sites such as abandoned buildings, residential buildings, warehouses, storm drains, and underground drainage pipes where adult mosquitoes find harborage. When this product is applied as a barrier treatment, do not apply within 100 feet (30 meters) of lakes and streams.

AERIAL APPLICATION INSTRUCTIONS

PermaSease™ 30-30 may be applied diluted or undiluted at rates of 0.001 to 0.007 pounds of permethrin per acre by fixed wing or rotary aircraft that are capable of making an ULTRA LOW VOLUME (ULV) application. For fixed wing and rotary aircraft with flat fan or rotary nozzles, apply at a sufficient airspeed to deliver the appropriate amount of a.i./acre and to achieve the appropriate droplet range as prescribed by this label. Apply when wind speed is equal to or greater than 1 mph. In order to compensate for windy and meteorological conditions and ensure drift into the target area, aerial applications with aircraft equipped with Global Positioning Systems (GPS) and/or spray cloud drift optimization software is recommended.

Do not apply by fixed wing aircraft at a height less than 100 ft, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.

Spray Droplet Size Calibration

For aerial applications made ≤ 200 ft above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ($Dv\ 0.5 < 60\mu m$) and that 90% of the spray is contained in droplets smaller than 100 microns ($Dv\ 0.9 < 100\mu m$).

For aerial applications made >200 ft above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns ($Dv\ 0.5 < 70\mu m$) and that 90% of the spray is contained in droplets smaller than 145 microns ($Dv\ 0.9 < 145\mu m$).

The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, or 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.

Prohibition on Aerial Use in Florida: Not for aerial application in the State of Florida unless specifically authorized by the Florida Bureau of Entomology and Pest Control and the Florida Department of Agriculture and Consumer Services.

STORAGE AND DISPOSAL

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

Storage: Store product in its original labeled container in a cool, dry, locked place designated for such insecticides and out of reach of children. In case of spillage, soak up with absorbent material such as sawdust, or fullers earth; sweep up and place in a labeled container and dispose of as follows.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site, or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows:

For Containers equal to or less than 5 Gallons: 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 mineral oil 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. If recycling is not available then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Containers greater than 5 Gallons: 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 mineral oil. 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 back and forth several times. Turn the container over on its other end and tip 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. If recycling is not available then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For Bulk Containers (Refillable Container): Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with mineral oil. Agitate vigorously or recirculate mineral oil with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

WARRANTY NOTICE

Read the entire Directions for Use and Warranty before using this product. By using this product, User or Buyer accepts the following warranty.

The Directions for Use of this product are believed to be adequate and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Unintended consequences may result because of unknown factors. All such risks shall be assumed by the User or Buyer.

ADAPCO LLC. is committed to providing high quality products. To the extent consistent with applicable law, ADAPCO LLC. makes no warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise that extend beyond statements on this label. To the extent consistent with applicable law, ADAPCO LLC., the Manufacturer, or the Seller shall not be liable for indirect, special, incidental or consequential damages. To the extent consistent with applicable law, the exclusive remedy of the User or Buyer shall not exceed the purchase price paid.

SECTION 1: IDENTIFICATION

Product Name: PERMASEASE® 30-30
Description: Insecticide
EPA Reg. No.: 86291-2-96263

Company Identification:
ADAPCO LLC
550 Aero Lane
Sanford, FL 32771

Emergency Response Telephone Numbers
For Spills Call: 1-(800)-424-9300
For Medical Emergencies Call: 1-(866)-897-8050

SECTION 2: HAZARD IDENTIFICATION

Classification in accordance with regulation HCS 29CFR §1910.1200



Signal word: Warning

Hazard statements

Harmful if swallowed, inhaled, or absorbed through the skin.
Causes moderate eye irritation.
May cause moderate skin irritation with prolonged or repeated contact.
May cause allergic skin reactions

Precautionary statements

Prevention

Wash thoroughly after handling.
Wear protective gloves.

Response

IF ON SKIN: Wash with plenty of water/soap. If skin irritation persists, get medical advice/ attention. Take off contaminated clothing and wash before reuse.

IF SWALLOWED: Call a poison control center/doctor/physician if you do not feel well. Rinse mouth.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison control center/doctor/physician if you do not feel well.

Dispose of contents/container in accordance with local regulation.

Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| INGREDIENTS: | CAS NO. | (% w/w) |
|--------------------------------|----------------|----------------|
| Permethrin | 52645-53-1 | 30.0% |
| Piperonyl Butoxide | 51-03-6 | 30.0% |
| Aliphatic Petroleum Distillate | 64741-89-5 | 40.0% |

SECTION 4: FIRST AID MEASURES

FIRST AID

If swallowed Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. 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 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 treatment advice. |
|-------------------|---|

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **Hotline Number:** You may also contact SafetyCall® International (866) 897-8050 for emergency medical treatment information.

Note to Physician: Contains petroleum distillate-vomiting may cause aspiration hazard.

SECTION 5: FIRE-FIGHTING MEASURES

Flash Point: >230°F (>110°C) (TCC)

Flammability Limits: Not determined

Extinguishing Media: Water fog, CO2, foam, dry chemical. Soft stream water of fog only if necessary.

Unusual Fire and Explosion Hazards: Pesticide fires have potential to emit hazardous decomposition products.

Fire-Fighting Procedures: Foam fire-extinguishing system is preferred because uncontrolled water can spread possible contamination. Do not allow fire-fighting water to escape into waterways or sewers. Toxic irritating gases can be formed.

Hazardous Decomposition Products: Under fire conditions hydrogen chloride, oxides of chlorine, carbon dioxide, carbon monoxide, and asphyxiants can be formed.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

Methods for cleaning up: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Use personal protective equipment. Do not allow to enter soil, waterways, or wastewater canal.

SECTION 7: HANDLING AND STORAGE

Advice on safe handling: Use only in area provided with appropriate exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Advice on protection against fire and explosion: Keep away from heat and sources of ignition.

Hygiene measures: Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet, or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

Requirements for storage areas and containers: Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls

Personal protective equipment: Please refer to the label and/or booklet. In all other cases the following recommendations would apply.

Respiratory protection: When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Hand protection: Chemical resistant nitrile rubber gloves

Eye protection: Safety glasses with side-shields

Skin and body protection: Wear long-sleeved shirt and long pants and shoes plus socks.

General protective measures: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm water. Keep and wash PPE separately from other laundry.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

| | |
|------------------------|----------------------------|
| Color: | Yellow, Gardner 3 |
| Physical State: | Liquid |
| Odor: | Faint Chemical Odor |
| Density: | 0.992 g/cc @ 25° C |
| Flash Point: | >230° F (>110° C) (TCC) |
| Solubility: | Does not disperse in water |
| Viscosity: | 30.17 CPS @ 25° C |
| pH: | 3.74 (1% dispersion) |
| Stability: | Stable |

SECTION 10: STABILITY AND REACTIVITY

Reactivity

| | |
|---|--|
| Thermal decomposition | No data available |
| Chemical stability | Stable under normal conditions. |
| Possibility of hazardous reactions | No dangerous reaction known under conditions of normal use. |
| Conditions to avoid | No data available |
| Incompatible materials | Strong oxidizing agents |
| Hazardous decomposition Products | No decomposition products expected under normal conditions of use. |

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies:

| | |
|------------------------------|-----------------------|
| Acute Oral LD50 (Rat): | >1,000 mg/kg |
| Acute Dermal LD50 (Rabbit): | >2,000 mg/kg |
| Acute Inhalation LC50 (Rat): | >2.06 mg/L/4 hr |
| Eye Irritation: | Moderately irritating |
| Skin Irritation: | Moderately irritating |
| Dermal Sensitization: | Positive |

Routes of Exposure: Skin, eye, inhalation, ingestion.

Systemic (Other Target Organ) Effects:

Excessive exposure may produce effects on the nervous system such as sensitivity to touch and sound, tremors, abnormal movement, and clonic convulsions. Long-term studies with permethrin in laboratory animal resulted in increased liver and kidney weights, induction of the liver microsomal drug metabolizing enzyme system, and histopathological changes in the lungs and liver. Long-term studies with piperonyl butoxide indicated increased organ weights in the liver, kidney, and adrenal glands.

Chronic Toxicity:

Permethrin caused neurobehavioral effects (e.g., tremors) and/or organ effects (liver, lung, and kidney) in chronic studies in rats, mice, and dogs. Piperonyl butoxide caused decreased body weights and/or increased organ weights (liver, kidney, adrenal) in chronic studies in rats and dogs.

Carcinogenicity:

Permethrin has low oncogenic potential in mice and no oncogenic potential in rats, therefore, EPA has concluded the likelihood of oncogenicity effects in humans from permethrin to be extremely low or nonexistent. Piperonyl butoxide gave no evidence of a carcinogenic potential in a lifetime feeding study in rats. In an oncogenicity study in mice, piperonyl butoxide caused an increased incidence of liver tumors. The US EPA has categorized piperonyl butoxide as a group C carcinogen, possible human carcinogen, based on limited evidence of cancer in laboratory animals.

Reproductive Toxicity:

Permethrin was not a reproductive toxicant in multi-generation reproduction studies in rats. Piperonyl butoxide was not a reproductive toxicant in a two-generation study in rats.

Developmental Toxicity:

Permethrin was not a primary developmental toxicant in rats, mice, and rabbits. Developmental effects (e.g., decreased fetal weights) were observed in rats and rabbits but were considered secondary to maternal toxicity. Piperonyl butoxide did not cause developmental, embryotoxic or teratogenic effects in developmental toxicity studies in rats and rabbits.

Neurotoxicity:

Permethrin caused neurobehavioral effects (e.g., tremors) in an acute and subchronic neurotoxicity screening study in rats without any correlating neuropathological changes.

Piperonyl butoxide did not demonstrate the potential to cause neurotoxicity in standard toxicity studies submitted to the Agency. EPA has concluded that there is not a concern for neurotoxicity resulting from exposure to piperonyl butoxide.

Mutagenicity:

Permethrin was not mutagenic or genotoxic in a battery of in vitro and in vivo mutagenicity studies. Piperonyl butoxide does not have significant potential for mutagenicity based on sufficient evidence.

SECTION 12: ECOLOGICAL INFORMATION

Environmental Hazards: This pesticide 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.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

Bioaccumulation (Permethrin & Piperonyl butoxide): Will not bioaccumulate.

Environmental Fate

Permethrin: The average half-life of permethrin in aerobic soils is 39.5 days, with a range from 11.6 to 113 days. Permethrin binds tightly to soil and is broken down primarily by microorganisms, but also by photolysis.

Piperonyl Butoxide: Reported to have a maximum half-life of 4.3 days in soil and from 0.55 to 1.64 days in aqueous environments. Gravitational settling removes piperonyl butoxide released in the atmosphere as an aerosol. Gaseous piperonyl butoxide degrades in the atmosphere with an estimated half-life of 3.4 hours.

Ecotoxicological Information

Permethrin: (EPA Ecotox Database)

| | |
|------------------------------|-----------|
| Rain trout LC50 (96-h): | 0.62 µg/L |
| Bluegill LC50 (96-h): | 0.79 µg/L |
| Bobwhite quail LD50 (8-day): | 5,200 ppm |

Piperonyl Butoxide: (Based on Piperonyl Butoxide Technical)

| | |
|--------------------------------------|---------------|
| Rainbow trout LC50 (96-h): | 6.12 ppm |
| Bluegill Sunfish LC50 (96-h): | 5.37 ppm |
| Bobwhite Quail LD50 (Oral): | > 2,250 mg/kg |
| Bobwhite Quail LC50 (5-day dietary): | > 5,620 ppm |
| Mallard Duck LC50 (5-d dietary): | > 5,620 ppm |

SECTION 13: DISPOSAL CONSIDERATIONS

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site, or at an approved waste disposal facility.

Container Disposal: Triple rinse (or equivalent) promptly after emptying. Do not reuse or refill this container. Offer for recycling if available. If recycling is not available then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Follow directions on product label or booklet.

RCRA Information: Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State, and local laws and are the user's responsibility. RCRA classification may apply. When and if this material is determined to be a waste, if discarded, this material may carry RCRA waste code(s) **NON-RCRA**. State and local laws may vary and must be considered.

SECTION 14: TRANSPORTATION INFORMATION

| | |
|----------------------|--|
| 49CFR | Not dangerous goods / not hazardous material |
| IMDG | |
| UN number | 3082 |
| Class | 9 |
| Packing group | III |
| Marine Pollutant | YES |
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PERMETHRIN, PIPERONYL BUTOXIDE SOLUTION) |
| IATA | |
| UN number | 3082 |
| Class | 9 |
| Packing group | III |
| Marine Pollutant | YES |
| Proper Shipping Name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PERMETHRIN, PIPERONYL BUTOXIDE SOLUTION) |

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variances due to package size or special transportation.

Freight Classification INSECTICIDES OR FUNGICIDES, N.O.I., OTHER THAN POISON

SECTION 15: REGULATORY INFORMATION

EPA/FIFRA Information:

This chemical is a pesticide product registered by the 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, and for workplace labels of non-pesticide chemicals. Following is the hazard information required on the pesticide label:

CAUTION. Harmful if swallowed, inhaled, or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. While using or handling this product wear long sleeved shirt and long pants, socks, and shoes. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Remove contaminated clothing and wash clothing before reuse.

SARA Title III Classification:

| | |
|------------------|--|
| Section 302: | Not applicable. |
| Section 311/312: | Acute health hazard (immediate) Chronic health hazard (delayed) |

ADAPCO LLC
PERMASEASE® 30-30

SAFETY DATA SHEET

Section 313: Permethrin (30.0%) CAS #:52645-53-1
Piperonyl Butoxide (30.0%) CAS #: 51-03-6

CA Proposition 65: Not applicable

CERCLA RQ: Not applicable.

RCRA Classification: Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

TSCA Status: The ingredients of this product are listed on the TSCA inventory or are exempt.

SECTION 16: OTHER INFORMATION

| HAZARD RATINGS | NFPA | HMIS | | |
|-----------------------|-------------|-------------|---|----------|
| HEALTH: | 1 | 1 | 0 | MINIMAL |
| FLAMMABILITY: | 1 | 1 | 1 | SLIGHT |
| REACTIVITY: | 0 | 0 | 2 | MODERATE |
| | | | 3 | HIGH |
| | | | 4 | SEVERE |

SDS Date: August 18, 2020

This document is prepared pursuant to the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012. In addition, other substances not "Hazardous" per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state, and local laws and regulations. See SDS for health and safety information.