NOTICE OF PEST CONTROL APPLICATION

Date of Application: November 19, 2025

Location: Ridgebrook Park

Reason for Application: To prevent and control wood-infesting insects in the pine trees and one mesquite tree.

Product Manufacturer Name: Astro Insecticide
-EPA registration no. 279-3141
-Active ingredients: Permethrin
-Precautionary statement: Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes, and clothing.

***Signs will be posted on the day of application**
***See attached label and SDS sheet**
***Dates are subject to change due to weather**

ASTRO®

INSECTICIDE

For Use by Individuals/Firms licensed by the State to apply insecticide products.

For use to control insect pests on lawns, ornamental trees and shrubs and around buildings for perimeter insect control including landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

EPA Reg. No. 279-3141 **EPA Est. 39578-TX-1**

Active Ingredient:	**By Wt.**
Permethrin**	36.8%
Other Ingredients* **	63.2%
	100.0%

**cis/trans ratio: Max. 55% (±) cis and min. 45% (±) trans
***Contains petroleum distillates.

Contains 3.2 pounds permethrin per gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

See other panels for additional precautionary information.

FMC Corporation
2929 Walnut Street
Philadelphia PA 19104

Net Contents: 1 Gallon

FIRST AID	
If swallowed	• Immediately call a poison control center or doctor • Do not induce vomiting unless told to do so by the 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.
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 treatment advice
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.

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 1-(800)-331-3148 for Emergency Assistance.

NOTE TO PHYSICIAN

Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

For Information Regarding the Use of this Product Call 1-800-321-1FMC (1362).

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION
Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear long-sleeved shirt and long pants, socks and shoes, and chemical-resistant gloves (such as barrier laminate or butyl rubber).
Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below, if you want more options, follow the instructions for category D on an EPA chemical resistance category selection chart.

GSS SL-1002 091422 03-09-15

Applicators using ULV cold foggers or fog/mist generators in indoor spaces must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks and
- Chemical-resistant headgear, if overhead exposure

All other applicators and handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber.
- Shoes plus socks
- Chemical-resistant apron for handlers performing animal dip applications.

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

User Safety Recommendations

Users Should:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

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 product is extremely toxic to aquatic organisms, including fish and aquatic invertebrates. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

This pesticide 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 treatment area.

Physical and Chemical Hazards

Do not use 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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Shake well before using.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Not for use in outdoor residential misting systems

Do not use in aircraft.

Do not make applications during rain.

All outdoor applications, if permitted elsewhere on this label, must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses, if allowed elsewhere on this label:

1. Applications to soil or vegetation, as listed on this label, around structures;
2. Applications to lawns, turf, and other vegetation, as listed on this label;
3. Applications to the side of a building, up to a maximum height of 3 feet above grade;
4. Applications to underside of eaves, soffits, doors, or windows permanently protected from rainfall by a covering, overhang, awning, or other structure;
5. Applications around potential pest entry points into buildings, when limited to a surface band not to exceed one inch in width;
6. Applications made through the use of a coarse, low pressure spray to only those portions of surfaces that are directly above bare soil, lawn, turf, mulch or other vegetation, as listed on this label, and not over an impervious surface, drainage or other condition that could result in runoff into storm drains, drainage ditches, gutters or surface waters, in order to control occasional invaders or aggregating pests.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry to treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water, is:

Coveralls

Chemical-resistant gloves, such as barrier laminate or butyl rubber.

Shoes plus socks.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

Do not allow people or pets on treated surfaces until the spray has dried.

Do not touch treated surface until dry.

Ornamental and Lawn Use

(Greenhouses, Interiorscapes and Plantscapes, Lawns, Trees and Shrubs)

General Application Instructions

Astro® may be used to control insect pests on ornamentals and lawns in landscaped areas around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.

Astro® is a 3.2 pounds per gallon formulation of the insecticide permethrin. Apply Astro® when insects appear or feeding is noticed. The higher rate should be used as pest populations increase. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed insect activity. Repeat application should be limited to no more than once per seven days.

Astro® may be applied by ground equipment. Use sufficient water to obtain full coverage.

To prepare a 0.5% emulsion, mix 1.6 oz. (50 ml) of Astro® Insecticide in 1 gallon of water.

Do not apply more than 2.0 lb. a.i./A/year.

Do not water to the point of runoff.

Astro® has demonstrated excellent plant safety; however, not all cultivars have been tested. Before treating large numbers of plants of a particular cultivar, treat a few plants and observe prior to full scale application.

Spray Drift Precautions:

All ground application equipment must be properly maintained and calibrated using appropriate carriers.

Do not make ground applications during temperature inversions.

Do not apply by air.

Make ground applications when the wind velocity favors on target product disposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph.

Do not apply by ground equipment within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries, and commercial fish farm ponds.

Resistance: Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state pest management authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present, if you experience difficulty with control and suspect that resistance is a reasonable cause. Immediately consult your local company representative or pest management advisor for the best alternative method of control for your area.

Recommended Application Rates

CROP	PEST	RECOMMENDED RATE	SPECIFIC INSTRUCTIONS
Ornamentals in greenhouses and interiorscapes, in residential landscaped areas and landscaped areas around institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields.	Ants Aphids Bagworm Beet Armyworm Birch Leafminer Cabbage Looper Cankerworms Citrus Thrips Fungus Gnat Gypsy Moth Caterpillars Heliothis spp Japanese Beetles Lace Bug Leaf Feeding Caterpillars Leafminers Leafhoppers Leafrollers Lygus Bugs Mealybugs Pine Sawflies Plant Bugs Root Weevils (Adult) Tent Caterpillars Webworms Whiteflies Zimmerman Pine Moths	Broadcast 4 to 8 Fl. Oz. per 100 Gals.	Apply sufficient volume of water to adequately cover foliage. Use higher rate for moderate to high infestations. Direct application to blooms may cause browning of petals. Marginal leaf burn may occur on Salvia, Dieffenbachia and Pteris Fern.
Ornamental Trees	Clearwing Moth Borers Ash Borer, Banded ash Clearwing, Dogwood borer, Lesser peachtree borer, Lilac borer, Oak borer, Peachtree borer, Rhododendron borer	1 to 2 qts. per 100 Gals.	Apply to the lower branches and trunks prior to adult emergence. Adult emergence varies according to pest species, host tree, environmental conditions and geographic location. Thorough coverage of bark is required for control.
	Bark Beetles Dendroctonus spp., Ips spp., Elm bark beetles, Mountain pine beetle, Pine engravers, Turpentine beetles, Western pine beetle	2 to 5 qts. per 100 Gals.	
	Coleopteran borers Bronze birch borer, Flatheaded appletree borer	2 to 5 qts. per 100 Gals.	
	For maximum residual control of the above listed pests	5.35 qts. per 100 Gals.	
	Nantucket Pine Tip Moth Coneworms* Seed Bugs*	4 to 8 Fl. Oz. per 100 Gals.	Begin application when adults appear. Repeat applications may be made on 5–7 day intervals as needed.
Lawns (around residential, institutional, public, commercial and industrial buildings, parks, recreational areas and athletic fields)	Chinchbugs Pill Bugs Sod Webworm (See also list of pests under Pest control on outside surfaces and around buildings)	0.4 to 0.8 fl. oz. per 1000 sq. ft.	Apply using sufficient water to provide adequate coverage.

*To control Coneworm, Seed Bugs—Use Astro® Insecticide at the following rates:
For high volume sprayers: Use 8 fluid ounces in 100 gallons of water. Apply 5 to 10 gallons of finished spray per tree.
For low volume sprayers: Use 42 fluid ounces in 100 gallons of water.
To control Webbing Coneworm—make first application within 1 week of female flower closure or peak pollen flight.
To control other coneworms and seed bugs—make first application within 30 days following flower closure.

Recommended Application Rates for Fruit and Nut Trees Around Residential Sites Only

Apply the appropriate amount of Astro® insecticide (see table below) in 1 gallon of water per 436 sq. ft. Astro® insecticide may be diluted and applied in greater volumes of water providing that the maximum application rates listed below are not exceeded on a per acre basis. For example: when attempting to control Navel Orangeworm on almonds using an application volume of 2 gallons per 436 sq. ft, the maximum legal dilution of Astro Insecticide is 1/4 teaspoon per 1 gallon. Do not make applications less than 10 days apart.

TREE	PEST	RECOMMENDED RATE	CROP
Almond	Navel Orangeworm Peach Twig Borer	1/2 tsp. per 1 gal/436 sq. ft.	Do not harvest nuts within 7 days after application. Do not apply more than 1.5 tsp. per 436 sq. ft. per year.
Apples	Green Fruitworm Oblique Banded Leafroller Plum Curculio Redbanded Leafroller Rosy Apple Aphid Spotted Tentiform Leafminer Tarnished Plant Bug White Apple Leafhopper	1/4 to 1/2 tsp per 1 gal/436 sq. ft.	Do not apply more than 1 tsp. per 436 sq. ft. per year.
Cherries	Green Fruitworm Lesser Peachtree Borer Plum Curculio Redbanded Leafroller Rose Chafer Tarnished Plant Bug	1/4 tsp per 1 gal/436 sq. ft.	Do not harvest fruit within 3 days after application. Do not make more than 4 applications per year. Do not make more than 3 applications after petal fall. Do not apply more than 1.25 tsp/436 sq. ft. per season.
Filberts	Filbertworm Oblique Banded Leafroller	1/2 tsp per 1 gal/436 sq. ft.	Do not harvest nuts within 14 days after application. Do not apply more than 1.75 tsp. per 436 sq. ft. per year.
Peaches	Green Fruitworm Lesser Peachtree Borer Oriental Fruit Moth Peach Twig Borer Plum Curculio Rose Chafer Tarnished Plant Bug	1/4 to 1/2 tsp per 1 gal/436 sq. ft.	Do not harvest fruit within 14 days after application. Do not apply more than 1.75 tsp. per 436 sq. ft. per year
Pears	Pear Psylla	1/2 tsp. per 1 gal/436 sq. ft.	Apply only during dormant through delayed dormant growth periods. Do not apply more than 1.5 tsp. per 436 sq. ft. per year.
Pistachios	Leaffooted Bugs Navel Orangeworm Peach Twig Borer Plant Bugs Stinkbugs	1/2 to 3/4 tsp. per 1 gal/436 sq. ft.	Nuts may be harvested on the day of application. Do not apply more than 2 tsp. per 436 sq. ft. per year. Do not apply after 10 percent hull split.

1 fl. oz.= 2 tablespoons = 6 teaspoons

Do not use household utensils to measure Astro® Insecticide.

Astro® insecticide is not for use on commercial fruit and nut trees.

Pest Control on Outside Surfaces and Buildings

Apply Astro® insecticide using a 0.5% emulsion as a residual spray to outside surfaces of buildings including, but not limited to, exterior siding, foundations, porches, window frames, eaves, patios, garages, refuse dumps, lawn areas adjacent or around private homes, duplexes, townhouses, condominiums, house trailers, apartment complexes, carports, garages, fence lines, storage sheds, barns, other residential structures, commercial, industrial and institutional buildings, soil, trunks of woody ornamentals and other areas where pests congregate or have been seen. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed insect activity. Repeat application should be limited to no more than once per seven days.

Vinyl and Aluminum Siding: The application of Astro® Insecticide to vinyl and aluminum siding (particularly lightly colored, aged, weathered or otherwise damaged) may result in staining, bleaching or discoloration. Factors such as extreme heat and direct sunlight can promote damage when using emulsifiable concentrates. Before applying Astro Insecticide to vinyl or aluminum siding, treat a small area and evaluate 30 minutes later to allow any potential staining to occur. Regardless of the test results, do not apply to vinyl or aluminum siding while exposed to direct sunlight or during the heat of the day.

Perimeter Treatment: Apply to a band of soil and vegetation 6 to 10 feet wide around and adjacent to the structure. Also, treat the foundation of the structure to a height of 2 to 3 feet. Use a spray volume of 2 to 10 gallons of emulsion per 1000 square feet. Higher volumes of water may be needed if mulch or leaf litter is present or foliage is dense. House siding may be treated if pests such as Gypsy moth adults and caterpillars, boxelder bugs, elm leaf beetles, earwigs or silverfish are present.

Applications to Outside Surfaces

<table>
<tr><th>Pest</th><th>Specific Instructions</th></tr>
<tr><td>Ants
Ant Mounds[1]
Armyworm
Fire Ants
Bees
Carpenter Bees
Bark Beetles[3]
Borers[3]
Boxelder Bugs[2]
Centipedes
Cockroaches
Asian Cockroaches
Crickets
Mole Crickets
Earwigs
Elm Leaf Beetles[2]
Firebrats
Fleas[4]
Ground Beetles
Gypsy Moths (adults & Caterpillars)[2]
Millipedes
Scorpions
Silverfish
Sowbugs
Spiders
Wasps
Ticks[4]
Flies
Carpenter Ants
Chinchbugs[4]
Pill Bugs
Sod Webworm</td><td>Apply as a pinstream, as a fine/coarse, low pressure spray (20 psi or less), as a spot treatment or with a paintbrush. Treat where pests are found or entry points of the structure such as window and door frames and along the foundation.
[1] Drench Method: Apply 1-2 gallons of emulsion to each mound area by sprinkling the mound until it is wet and treat a 4 foot diameter circle around the mound. Use the higher volume for mounds larger than 12". For best results, apply in cool weather, such as in early morning or late evening hours, but not in the heat of the day.
[2] Boxelder Bugs, Elm Leaf Beetles, Gypsy Moth Caterpillars: Spray tree trunks, building siding or wherever pests congregate, thoroughly but not to the point of runoff.
[3] Borers and Bark Beetles: To prevent infestation of trees and woody ornaments, spray the bark thoroughly but not to the point of runoff.
[4] Fleas: Mix 1.6-3.2 fl. oz. of Astro® in 16 to 100 gallons of water and apply to 4000 square feet of lawn. Use the lower rate to knock down existing fleas and the higher rate where faster knockdown or greater residual is desired. For example:
<table>
<tr><th>Lawn</th><th>Sq Ft</th><th>Fl. Oz of Astro®</th><th>Gals of Water</th></tr>
<tr><td>Small</td><td>2,000</td><td>0.8 to 1.6</td><td>8 to 50</td></tr>
<tr><td></td><td>4,000</td><td>1.6 to 3.2</td><td>16 to 100</td></tr>
<tr><td>Medium</td><td>6,000</td><td>2.4 to 4.8</td><td>24 to 150</td></tr>
<tr><td>Large</td><td>12,000</td><td>4.8 to 9.6</td><td>48 to 300</td></tr>
</table>
Lawn should not be longer than 3 inches at the time of application. Repeat application should be limited to no more than once per seven days. Application in combination with compatible surfactants may enhance penetration. Arid climates generally require the higher volumes.</td></tr>
</table>

Subsurface Injection of Astro® to Flush Mole Crickets: ***(In New York State, this product may NOT be used for subsurface injection).*** To increase flushing of mole crickets with subsurface insecticide applications, use Astro with a companion mole cricket control product (such as Talstar® PL Granular) and apply at the rate of 0.2 to 0.8 fluid ounces of Astro per 1,000 square feet. Applications must be made in accordance with the more restrictive of label limitations and precautions. No label application rates may be exceeded. This product cannot be used with any product with label prohibitions against such mixing.

Storage and Disposal

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

Pesticide Storage: Store at temperatures above 40°F (5°C)

If separation occurs during storage, and less than entire contents of container are to be used, remix by inverting and shaking the container several times until contents are homogeneous. For the 5 gallon U-Turn® container, grasp handle and rock container forward and backward vigorously until contents are homogeneous. For 10 gallon U-Turn container, remix with mechanical agitator by attaching a power drill with inch chuck to agitator shaft and agitating by spinning shaft for 1 minute prior to dispensing.

If crystals have formed, warm to room temperature (70°F) (21°C) by room heating for 24–48 hours and shake occasionally until crystals dissolve and product appears uniform. Do not use external source of heat for warming container.

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call CHEMTREC (Transportation and Spills): (800) 424-9300.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter, or commercial clay or gel absorbents. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal:
Metal or Plastic Container: Non-refillable container. Do not reuse or refill this container. Triple rinse as follows: Empty the contents into application equipment or a mix tank and drain for 10 seconds after flow begins to drip. Fill container full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or 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. Then offer for recycling, if available or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill.

Returnable/Refillable Sealed Container: Refill this container with pesticide only. Do not reuse this container for any other purpose. Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase. 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.

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. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and buyer assumes the risk of any such use.

To the extent consistent with applicable law, FMC or seller shall not 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 FMC 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 FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.

Astro,U-Turn and FMC—Trademarks of FMC Corporation

SAFETY DATA SHEET

ASTRO® INSECTICIDE

SDS # : 1784-1-A
Revision date: 2019-06-03
Format: NA
Version 1.04

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name ASTRO® INSECTICIDE

Other means of identification

Product Code(s) 1784-1-A

Synonyms PERMETHRIN (FMC 33297): 3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate or 3-phenoxybenzyl (1RS)-cis-trans-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate (IUPAC name); (3-phenoxyphenyl)methyl 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate (CAS name)

Active Ingredient(s) Permethrin

Chemical Family Pyrethroid Pesticide

Alternate Commercial Name Dragnet FT, Dragnet 36.8 EC Termiticide/Insecticide

Recommended use of the chemical and restrictions on use

Recommended Use: Insecticide

Restrictions on Use: Use as recommended by the label.

Supplier Address

FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104
(215) 299-6000 (General Information)
msdsinfo@fmc.com (E-Mail General Information)

Emergency telephone number

Medical Emergencies :
1 800 / 331-3148 (U.S.A. & Canada)
1 651 / 632-6793 (All Other Countries - Collect)

For leak, fire, spill or accident emergencies, call:
1 800 / 424-9300 (CHEMTREC - U.S.A.)
1 703 / 741-5970 (CHEMTREC - International)
1 703 / 527-3887 (CHEMTREC - Alternate)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 4

Skin sensitization	Category 1B
Specific target organ toxicity (single exposure)	Category 2
Specific target organ toxicity (repeated exposure)	Category 2
Aspiration toxicity	Category 1

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Danger

Hazard Statements
H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H317 - May cause an allergic skin reaction
H332 - Harmful if inhaled
H371 - May cause damage to organs
H373 - May cause damage to organs through prolonged or repeated exposure

Precautionary Statements - Prevention
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P272 - Contaminated work clothing should not be allowed out of the workplace
P280 - Wear protective gloves
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
Precautionary Statements - Response
P308 + P311 - If exposed or concerned: Call a POISON CENTER or doctor
P302 + P352 - IF ON SKIN: Wash with plenty of water and soap
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
P363 - Wash contaminated clothing before reuse
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing
P312 - Call a POISON CENTER or doctor if you feel unwell
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P331 - Do NOT induce vomiting
P330 - Rinse mouth

Precautionary Statements - Storage
P405 - Store locked up

Precautionary Statements - Disposal
P501 - Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
No hazards not otherwise classified were identified.

Other Information
Very toxic to aquatic life with long lasting effects. Causes mild skin irritation. May be harmful in contact with skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Family Pyrethroid Pesticide.

Chemical name	CAS-No	Weight %
Permethrin	52645-53-1	36.8
Petroleum distillates, hydrotreated light	64742-47-8	10-20
1,1'-Biphenyl, bis(1-methylethyl)-	69009-90-1	20-30

Synonyms are provided in Section 1.

4. FIRST AID MEASURES

Eye Contact Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

Skin Contact Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

Inhalation Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Ingestion Immediately call a poison control center or doctor. 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.

Most important symptoms and effects, both acute and delayed Central nervous system effects.

Indication of immediate medical attention and special treatment needed, if necessary This product is a pyrethroid. If large amounts have been ingested, the stomach and intestines should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils, or alcohol may increase absorption and so should be avoided. Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Foam. Carbon dioxide (CO_2). Dry chemical. Water spray or fog.

Specific Hazards Arising from the Chemical Combustible liquid

Explosion data
Sensitivity to Mechanical Impact No information available.
Sensitivity to Static Discharge No information available.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus and full protective gear. Isolate fire area. Evaluate upwind.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Isolate and post spill area. Remove all sources of ignition. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.

Other For further clean-up instructions, call FMC Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

Environmental Precautions Keep people and animals away from and upwind of spill/leak. Keep material out of lakes, streams, ponds, and sewer drains. Keep out of waterways.

Methods for Containment Dike to prevent runoff. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Clean and neutralize spill area, tools and equipment by washing with water and soap. Absorb rinsate and add to the collected waste. Waste must be classified and labeled prior to recycling or disposal. Dispose of waste as indicated in Section 13.

7. HANDLING AND STORAGE

Handling Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

Storage Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep out of reach of children and animals. Keep/store only in original container.

Incompatible products None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Petroleum distillates, hydrotreated light (64742-47-8)	TWA: 200 mg/m³ Skin	-	-	-

Appropriate engineering controls

Engineering measures Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

Eye/Face Protection If there is a potential for exposure to particles which could cause eye discomfort, wear chemical goggles.

Skin and Body Protection Wear long-sleeved shirt, long pants, socks, and shoes.

Hand Protection Protective gloves

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, chewing gum or using tobacco. Shower or bathe at the end of working. Remove and wash contaminated clothing before re-use. Launder work clothing separately from regular household laundry.

General information If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance Amber Liquid
Physical State Liquid
Color Amber
Odor Faint hydrocarbon

Odor threshold	No information available
pH	3.75
Melting point/freezing point	Not applicable
Boiling Point/Range	No information available
Flash point	82.2 °C / 179.96 °F Tag Closed Cup
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	No information available
Vapor density	No information available
Relative density	8.61 lb/gal
Specific gravity	1.033 @ 20°C
Water solubility	Emulsifies
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	No information available
Molecular weight	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions

Chemical Stability Stable under recommended storage conditions.
Possibility of Hazardous Reactions None under normal processing.
Hazardous polymerization Hazardous polymerization does not occur.

Conditions to avoid Excessive heat, Extreme risk of explosion by shock, friction, fire or other sources of ignition
Incompatible materials None known.
Hazardous Decomposition Products Chlorine, Hydrogen chloride, Carbon oxides (COx), Aldehydes.

11. TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral 998 mg/kg (rat)
LD50 Dermal > 2000 mg/kg (rabbit)
LC50 Inhalation > 4.3 mg/L 4 hr (rat)

Serious eye damage/eye irritation Mildly irritating.
Skin corrosion/irritation Moderately irritating.
Sensitization Sensitizer

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Permethrin (52645-53-1)	3129 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.09 mg/L (Rat) 4 h
Petroleum distillates, hydrotreated light (64742-47-8)	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.2 mg/L (Rat) 4 h

Information on toxicological effects

Symptoms Large toxic doses of the formulated product, administered by ingestion to animals, produced central nervous system effects with symptoms that include hypersensitivity to touch and sound, tremors, and clonic convulsions. Overexposure via inhalation produced symptoms such as squinting eyes, irregular and rattling breathing, and ataxia.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity Effects are expected to be similar to those that are seen with acute toxicity.

Mutagenicity Permethrin: Not genotoxic in laboratory studies.

Carcinogenicity Permethrin: Evidence of tumors in mice but is not considered relevant to humans.

Neurological effects Permethrin: Clinical signs of neurotoxicity include altered motor activity and neurobehavioral effects, with no signs of histopathology.

Reproductive toxicity Permethrin: No toxicity to reproduction in animal studies.

Developmental toxicity Permethrin: Not teratogenic in animal studies.

STOT - single exposure May cause damage to organs. See listed target organs below.
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure. See listed target organs below.
Target organ effects Permethrin: Central Nervous System (CNS).

Neurological effects Permethrin: Clinical signs of neurotoxicity include altered motor activity and neurobehavioral effects, with no signs of histopathology.

Aspiration hazard Potential for aspiration if swallowed.

Chemical name	ACGIH	IARC	NTP	OSHA
Permethrin 52645-53-1		Group 3		

Legend:
IARC (International Agency for Research on Cancer)
Group 3 - Not classifiable as to its carcinogenicity to humans

12. ECOLOGICAL INFORMATION

Ecotoxicity

Permethrin (52645-53-1)				
Active Ingredient(s)	Duration	Species	Value	Units
Permethrin	48 h EC50	Crustacea	0.001	mg/L
	72 h EC50	Algae	0.0125	mg/L
	21 d NOEC	Crustacea	0.039	µg/L
	96 hr NOEC	Algae	0.9	µg/L
	21 d NOEC	Fish	0.3	µg/L
	96 h LC50	Fish	5.3	mg/L
	96 h EC50	Algae	0.010	mg/L

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Glyceral triacetate 102-76-1		48 h LC50: = 170 mg/L (Leuciscus idus) static	48 h EC50: = 380 mg/L (Daphnia magna)
Petroleum distillates, hydrotreated light 64742-47-8		96 h LC50: = 2.2 mg/L (Lepomis macrochirus) static 96 h LC50: = 2.4 mg/L (Oncorhynchus mykiss) static 96 h LC50: = 45 mg/L (Pimephales promelas) flow-through	96 h LC50: = 4720 mg/L (Den-dronereides heteropoda)
2-methylpropan-1-ol 78-83-1	48 h EC50: = 230 mg/L (Desmodesmus subspicatus)	96 h LC50: 1120 - 1520 mg/L (Oncorhynchus mykiss) flow-through 96 h LC50: 1370 - 1670 mg/L (Pimephales promelas) flow-through 96 h LC50: 1480 - 1730 mg/L (Lepomis macrochirus) flow-through 96 h LC50: = 375 mg/L	48 h EC50: 1070 - 1933 mg/L (Daphnia magna) Static 48 h EC50: = 1300 mg/L (Daphnia magna)

		(Pimephales promelas) static	

Persistence and degradability Permethrin: Moderately persistent. Does not readily hydrolyze. Not readily biodegradable.

Bioaccumulation Permethrin: The substance has a potential for bioconcentration.

Mobility Permethrin: Immobile; Not expected to reach groundwater.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is prohibited. If these wastes cannot be disposed of by use according to label instructions, contact appropriate disposal authorities for guidance. Proper personal protective equipment, as described in Sections 7 and 8, must be worn while handling materials for waste disposal.

Contaminated Packaging Containers must be disposed of in accordance with local, state and federal regulations. Refer to the product label for container disposal instructions.

14. TRANSPORT INFORMATION

DOT Not regulated for transportation if shipped in Non Bulk packaging. The classification below pertains to the shipment in Bulk packaging.

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
Marine Pollutant	Permethrin.
Description	NA1993, Combustible liquid, n.o.s. (Aromatic hydrocarbons), III

TDG Classification below is only applicable when shipped by vessel and is not applicable when shipped by road or rail only.

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
Marine Pollutant	Permethrin.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (permethrin), 9, PGIII, Marine Pollutant

ICAO/IATA

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (permethrin), 9, PGIII, Marine Pollutant

IMDG/IMO

UN/ID no	UN3082
Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Hazard class	9
Packing Group	III
EmS No.	F-A, S-F
Marine Pollutant	Permethrin
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s. (permethrin), 9, PGIII, Marine Pollutant

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical name	CAS-No	Weight %	SARA 313 - Threshold Values %
Permethrin - 52645-53-1	52645-53-1	36.8	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	Yes
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

Clean Water Act
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
2-methylpropan-1-ol 78-83-1	5000 lb 2270 kg	

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 as required on the pesticide label:

CAUTION
Harmful if swallowed. Harmful if absorbed through the skin. Prolonged or frequent skin contact may cause allergic reactions in some individuals.
This product is extremely toxic to fish and aquatic invertebrates.

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Permethrin 52645-53-1	X	X	

International Inventories

Chemical name	TSCA (United	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)

	States)							
Permethrin 52645-53-1			X	X	X	X	X	X
Petroleum distillates, hydrotreated light 64742-47-8	X	X	X		X	X	X	X
1,1'-Biphenyl, bis(1-methylethyl)- 69009-90-1	X	X	X	X	X			

Mexico - Grade Moderate risk, Grade 2

WHMIS Statement
This product has been classified in accordance with the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

WHMIS Hazard Class D2B - Toxic materials

16. OTHER INFORMATION

NFPA	**Health Hazards** 2	**Flammability** 2	**Instability** 0	**Special Hazards** -
HMIS	**Health Hazards** 2*	**Flammability** 2	**Physical hazard** 0	**Personal Protection** X

**Indicates a chronic health hazard.*

NFPA/HMIS Ratings Legend Severe = 4; Serious = 3; Moderate = 2; Slight = 1; Minimal = 0

Revision date: 2019-06-03
Reason for revision: SDS sections updated

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End of Safety Data Sheet