

MATERIAL SAFETY DATA SHEET

Paradigm

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1. IDENTIFICATION

Product name:	Paradigm
Chemical name of active ingredient(s):	Lambda Cyhalothrin: [1 α (S*),3 α (Z)]-(\pm)-cyano-(3-phenyloxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate
Manufacturer:	Makhteshim Agan of North America, Inc. 4515 Falls of Neuse Road, Suite 300 Raleigh, NC 27609 Phone: 919-256-9300
For fire, spill, and/or leak emergencies, contact Infotrac:	Phone: 1-800-535-5053
For medical emergencies and health and safety inquiries, contact Prosar:	Phone: 1-877-250-9291

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMMON NAME	CAS NO.	%	OSHA PEL	ACGIH TLV	NTP/IARC/OSHA Carcinogen
Lambda-cyhalothrin	91465-08-6	12.7	NE	NE	NA

NE=None established; NA=Not applicable

3. HAZARDS IDENTIFICATIONS

PHYSICAL PROPERTIES:

Appearance: Light yellow liquid

Odor: Mild organic

EMERGENCY OVERVIEW CAUTION Harmful if swallowed 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. Remove and wash contaminated clothing before reuse. Wear appropriate protective clothing.

SYMPTOMS OF ACUTE EXPOSURE: Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Skin exposure may also result in a sensation described as a tingling, itching, burning, or prickly feeling. Onset may occur immediately to 4 hours after exposure and may last 2-30 hours, without damage. Wash exposed areas once with soap and water. Relief from the skin sensation may be obtained by applying an oil-based cream.

HAZARDOUS PRODUCTS OF COMBUSTION: Product can decompose at high temperatures forming toxic and irritating gases.

4.FIRST AID MEASURES

FIRST AID	
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.
IF SWALLOWED:	<ul style="list-style-type: none"> Call a poison control center or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
IF IN EYES:	<ul style="list-style-type: none"> 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 INHALED:	<ul style="list-style-type: none"> • Move person 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.
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact Prostar at 1-877-250-9291 for emergency medical treatment information.</p>	

5. FIRE FIGHTING MEASURES

FLASH POINT: > 230°F

EXTINGUISHING MEDIA: Water spray, foam or dry chemical.

HAZARDOUS DECOMPOSITION PRODUCTS

Product can decompose at high temperatures forming toxic and irritating gases.

FIRE-FIGHTING PROCEDURES

Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area and equipment until decontaminated. Water runoff can cause environmental damage. Dike fire control water for later disposal

6. ACCIDENTAL RELEASE MEASURES

ACTION TO TAKE FOR SPILLS/LEAKS: Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outline in Section 8 – Exposure Control/Personal Protection. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (e.g., commercial products such as Tide®, Joy®, Spin and Span®). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

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

PRECAUTIONS TO BE TAKEN IN HANDLING: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash hands thoroughly with soap and water after handling this product.

PRECAUTIONS TO BE TAKEN IN STORAGE: Store in original containers only. Keep container closed when not in use. Do not store near food or feed. In case of spill or leak on floor or paved surfaces, soak up with sand, earth or synthetic absorbent. Remove to chemical waste area for disposal. Do not allow product to freeze.

STORAGE TEMPERATURE: Normal ambient temperatures. Do not allow product to freeze.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURER, FORMULATION, PACKAGING AND USE OF THIS PRODUCT:

- Ingestion: Prevent eating, drinking or tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
- Eye contact: Where eye contact is likely, use chemical splash goggles.
- Skin contact: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, socks and chemical-resistant footwear.

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Inhalation: In areas with inadequate ventilation and 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.

APPLICATORS AND OTHER HANDLERS MUST WEAR:

- Long sleeved shirt and long pants
- Chemical resistant gloves, such as nitrile rubber or butyl rubber
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

User 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.

EXPOSURE GUIDELINES: Refer to Section 2.

ENGINEERING CONTROLS: Minimize airborne concentrations.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Light yellow liquid

ODOR: Mild organic

FLASH POINT: > 230°F

pH: 4.80 (1% dispersion)

DENSITY: 0.94 g/mL

VISCOSITY: 12.0 centipoise @23°C; 7.63 centipoise @39°C

10. STABILITY AND REACTIVITY

STABILITY: This product is stable under normal use and storage.

CONDITIONS TO AVOID: Do not use or store near heat or open flame. Do not allow product to freeze.

MATERIALS TO AVOID: None known.

HAZARDOUS POLYMERIZATION: Not known to occur.

HAZARDOUS DECOMPOSITION PRODUCTS: Can decompose at high temperatures forming toxic and irritating gases.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY/IRRITATION STUDIES

Acute Oral LD ₅₀ (Rat):	582 mg/kg
Acute Dermal LD ₅₀ (Rat):	>2,020 mg/kg
Acute Inhalation LC ₅₀ (Rat):	2.28 mg/L air (4-hours)
Eye Irritation (Rabbit):	Mildly irritating
Dermal Irritation (Rabbit):	Non-irritating
Dermal Sensitization:	A skin sensitizer

REPRODUCTIVE/DEVELOPMENTAL EFFECTS: (Lambda-cyhalothrin technical)

Not a developmental or reproductive toxicant.

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CHRONIC/SUBCHRONIC TOXICITY STUDIES: (Lambda-cyhalothrin technical)

Reversible paresthesia (abnormal skin sensation). Reversible clinical signs of neurotoxicity in mammals.

CARCINOGENICITY: (Lambda-cyhalothrin technical)

No treatment-related tumors in rats or mice.

OTHER TOXICITY INFORMATION: In humans, contact with exposed skin may result in temporary itching, tingling, burning or numbness, called paresthesia. The effect may result from splash, aerosol, or hot vapor contact, or transfer to the face from contaminated gloves and hands. The symptoms normally disappear within 24 hours. Face and genital areas are especially susceptible to this effect. Paresthesia involving the face is also known as "subjective facial sensation" or SFS.

TARGET ORGANS:

Lambda-cyhalothrin technical: Liver, nervous system

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: This pesticide is extremely toxic to fish and aquatic organisms and toxic to wildlife. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash water.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

ECO-ACUTE TOXICITY: (Lambda-cyhalothrin technical)

Bees LD50:	0.038 ug/bee
Invertebrates (water flea) LC50:	0.36 ug/L
Fish (rainbow trout) LC50:	0.24 ug/L
Fish (bluegill) LC50:	0.21 ug/L
Bird (Mallard duck) 8-day dietary LC50:	>3,950 mg/kg

ENVIRONMENTAL FATE:

Not persistent in soil or water, Immobile in soil. Sinks in water after 24 hours.

13. DISPOSAL CONSIDERATIONS

PESTICIDE DISPOSAL: Do not contaminate water, food, or feed by storage and disposal. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticides, spray mixture, or rinsate is a violation of federal law. 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: Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

14. TRANSPORT INFORMATION

DOT CLASSIFICATION:

Not regulated

INTERNATIONAL TRANSPORTATION:

IMO (vessel): UN3082, Environmentally hazardous substance, n.o.s. (lambda-cyhalothrin), 9, PGIII, Marine Pollutant

IATA (air): UN3082, Environmentally hazardous substance, n.o.s. (lambda-cyhalothrin), 9, PGIII, Marine Pollutant

15. REGULATORY INFORMATION

SARA TITLE III CLASSIFICATION:

Section 302: Not applicable
Section 311/312: Acute health hazard (immediate)
Section 313: Not applicable

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.

16. OTHER INFORMATION

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

MSDS DATE: 1-23-12

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