



J. Oliver Products, LLC
3187 Robertson Gin Rd.
Hernando, MS 38632

In Case of Emergency,
Call Chemtrec 1-800-424-9300

MATERIAL SAFETY DATA SHEET

1. Product Identification

Product Name: **Lambda-Cy AG Gold**
EPA Signal Word: Danger
Active Ingredient (%): Lambda-Cyhalothrin Technical (13.1%) CAS No: 91465-08-6
Chemical Name: {1a(S*),3a(Z)}-cyano(3-phenoxyphenyl)methyl-3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate
Chemical Class: A Pyrethroid insecticide
EPA Registration Number(s): 83222-11

2. Composition/Information on Ingredients

Material	OSHA PEL	ACGIH TLV	OTHER	NTP/IARC/OSHA carcinogen
Ethyl Benzene (<=1.5%)	100 ppm TWA	100 ppm TWA	100 ppm TWA **	IARC Group 2B
Xylene (<=7.5%)	100 ppm TWA	100 ppm; 150 ppm STEL	100 ppm TWA **	IARC Group 3
1,2,4-Trimethylbenzene(<=10%)	Not Est.	25 ppm TWA	25 ppm TWA **	No
Petroleum Solvent	Not Est.	Not Est.	100 mg/m ³ (19 ppm) TWA *	No
Lambda-Cyhalothrin Technical (13.1%)	Not Est.	Not Est.	0.04 mg/m ³ TWA (skin) **	No

* recommended by manufacturer
** recommended by NIOSH

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

3. Hazards Identification

Symptoms of Acute Exposure

Irritating to eyes and skin. Very toxic by inhalation. Toxic if swallowed. May cause sensitization by skin contact. May cause respiratory tract irritation.

Exposure to high vapor levels may cause headache, dizziness, numbness, nausea, un-coordination, or other central nervous system effects.

May cause temporary itching, tingling, burning, or numbness of exposed skin, called paresthesia.

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Clear yellow liquid

Odor: Solvent

Unusual Fire, Explosion and Reactivity Hazards

Combustible liquid can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back. During a fire, irritation and possibly toxic gases may be generated by thermal decomposition or combustion.

4. First Aid Measures

Have the product container, label or Material Safety Data Sheet with you when calling ChemTrec, a doctor, or going for treatment.

Ingestion: If swallowed call Chemtrec 1-800-424-9300 or doctor immediately for treatment advice. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling Chemtrec 1-800-424-9300 or a doctor. Do not give anything by mouth to an unconscious person.

Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Chemtrec 1-800-424-9300, a poison control center, or doctor for treatment.

Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Chemtrec 1-800-424-9300, a poison control center or doctor for further treatment.

Inhalation: If inhaled: 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 Chemtrec 1-800-434-9300, a poison control center or doctor for further treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hrs. Treat symptomatically.

Contains petroleum distillate – vomiting may cause aspiration pneumonia.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. Fire Fighting Measures

Fire and Explosion

Flash Point (Test Method):	115°F	
Flammable Limits (%in Air):	Lower: 1.1%	Upper: 6.1%
Auto ignition Temperature:	Not Available	
Flammability:	Combustible liquid	

Unusual Fire, Explosion and Reactivity Hazards

Combustible liquid can release vapors that form explosive mixtures at temperatures at or above the flash point. Heavy vapors can flow along surfaces to distant ignition sources and flash back. During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of a Fire

Use appropriate extinguishing media for combustibles in the area. 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. If water is used to fight fire, dike and collect runoff.

6. Accidental Release Measures

In Case of Spill or Leak

Control the spill at its source. Contain the soil 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 in Protective Equipment Section. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent (eg. Commercial products such as Tide, Joy, Spic 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

Store material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. Exposure Control/Personal Protection

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT. FOR COMMERCIAL APPLICATION AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

- Ingestion: Prevent eating, drinking, 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. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Skin Contact: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks, and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear. Stringent housekeeping measures are necessary to prevent translocation of the material from contaminated work surfaces to uncontaminated surfaces (railing and doors, etc.). Unprotected contact with such translocated material can result in paresthesia effects (see section 11).
- Inhalation: A combination particulate/organic vapor respirator may be necessary until effective engineering controls are installed to comply with occupational exposure limits. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with and HE prefilter.

Use a self contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. Physical and Chemical Properties

Appearance:	Clear yellow liquid
Odor:	Solvent
Melting Point:	N/A
Boiling Point:	< 204.8°F
Specific Gravity/Density:	0.91 g/ml
pH:	5.9(5% suspension in H ₂ O)

Solubility in H₂O

Lambda-Cyhalothrin Technical: 0.004 mg/l

Vapor Pressure

Lambda-Cyhalothrin Technical: 1.5 X 10⁽⁻⁹⁾ mmHg @ 68°F

10. Stability and Reactivity

Stability:	Stable under normal use and storage conditions
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	None known.
Materials to Avoid:	None known.
Hazardous Decomposition Products:	Can decompose at high temperatures forming toxic gases.

11. Toxicological Information

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	<u>Moderately Toxic</u>	
	Oral (LD50 Rat):	=110 mg.kg body weight
Dermal:	Not Available	
Inhalation:	<u>Moderately Toxic</u>	
	Inhalation (LC50 Rat):	=0.175 mg/l air = 4 hrs.
Eye contact:	Severely irritating (Rabbit)	
Skin contact:	Severely irritating (Rabbit)	
Skin Sensitization:	Moderate Sensitizer (Guinea pig)	

Reproductive/Developmental Effects

Lambda-Cyhalothrin Technical: Not a developmental or reproductive toxicant.

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 hrs. Face and genital areas are especially susceptible to this effect. Paresthesia involving the face is also known as "subjective facial sensation" of SFS.

Toxicity of Other Components

1,2,4-Trimethylbenzene (<= 10%)

Inhalation of 1,2,4-Trimethylbenzene at high concentrations can cause central nervous system depression, respiratory tract irritation, asphyxiation, cardiac stress and coma. Effects of chronic exposure to this solvent can include blood disorders (anemia, leucopenia) and kidney or liver damage.

Ethyl Benzene (<= 1.5%)

Inhalation of ethyl benzene at high concentrations can cause central nervous system depression, respiratory tract irritation, asphyxiation, cardiac stress and coma.

Petroleum Solvent

The supplier reports that high vapor/aerosol concentrations(>1000 ppm) are irritation to the eyes and the respiratory tract, may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness and other central nervous system effects.

Xylene (<= 7.5%)

Inhalation of xylene at high concentrations can cause central nervous system depression, respiratory tract irritation, asphyxiation, cardiac stress, and coma.

Target Organs

Active Ingredients

Lambda-Cyhalothrin Technical: Liver, nervous system

Inert Ingredients

1,2,4-trimethylbenzene: CNS, liver, blood, respiratory tract, skin, and eye

Ethyl benzene: CNS, Respiratory tract, skin

Petroleum Benzene: CNS, respiratory tract, eye

Xylene: CNS, respiratory tract, skin

12. Ecological Information

Summary of Effects

Lambda-Cyhalothrin Technical: Slightly toxic to birds. Highly toxic to fish, invertebrates, and bees.

Eco-Acute Toxicity

Lambda-Cyhalothrin Technical: Bees LC50/EC50 0.038 ug/bee
Invertebrates (Water Flea) LC50/EC50 0.00036 ppm
Fish (Trout) LC50/EC50 0.00021 ppm
Birds (8-day dietary – Bobwhite Quail) LC50/EC50 > 5,300 ppm
Birds (8-day dietary – Mallard duck) LC50/EC50 > 3,948 ppm

Eco-Chronic Toxicity

Lambda-Cyhalothrin Technical: N/A

Environmental Fate

Lambda-Cyhalothrin Technical: The info. Presented here is for the active ingredient, lambda-cyhalothrin. Not persistent in soil or water. Immobile in soil. Sinks in water (after 24 hrs.)

13. Disposal Considerations

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Ignitable D001
Listed Waste: Contains Xylene U239

14. Transport Information

DOT Classification

Ground Transport – NAFTA
Proper shipping name: Pyrethroid Pesticides, Liquid, Toxic, Flammable, N.O.S. (contains Lambda-Cyhalothrin/Xylene)
Hazard Class or Division: Class 6.1(3)
Identification Number: UN3351
Packing Group: PG III

B/L Freight Classification

Insecticides, NOI, Poison

Comments

Water Transport – International
Proper Shipping Name: Pyrethroid Pesticides, Liquid, Toxic, Flammable, N.O.S. (contains Lambda-Cyhalothrin/Xylene)
Hazard Class or Division: Class 6.1(3)
Identification Number: UN3351
Packing Group: PG III

Air Transport – International
Cargo Aircraft Only
Proper Shipping Name: Pyrethroid Pesticides, Liquid, Toxic, Flammable, N.O.S. (contains Lambda-Cyhalothrin/Xylene)
Hazard Class or Division: Class 6.1(3)
Identification Number: UN3351
Packing Group: PG III

15. Regulatory Information

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard
Chronic Health Hazard
Fire Hazard

Section 313 Toxic Chemicals: Ethyl Benzene (<-1.5%) (CAS No. 100-41-4)
Xylene (<=7.5%) (CAS No. 1330-20-7)
1,2,4-Trimethylbenzene (<=10%) (CAS No. 95-63-6)

California Proposition 65

N/A

CERCLA/SARA 302 Reportable Quantity (RQ)

Report product spills > 175 gal. (based on p-xylene {RQ = 100 lbs.} in the formulation)

RCRA Hazardous Waste Classification (40 CFR 261)

N/A

TSCA Status

Exempt from TSCA, subject to FIFRA

16. Other Information

NFPA Hazard Ratings

Health: 2
Flammability: 2
Instability: 0

HMIS Hazard Ratings

Health: 2
Flammability: 2
Instability: 0

0 Minimal
1 Slight
2 Moderate
3 Serious
4 Extreme

For non-emergency questions about this product call: 662-429-7621

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

End of MSDS