



**Material Safety Data Sheet (MSDS)**  
**Amigo ULV**

**IDENTIFICATION OF THE SUPPLIER:**

**AGRO CHEMICALS INDUSTRIES LTD**  
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**PRODUCT IDENTIFICATION:**

**Common Name:** Lambda cyhalothrin 4% w/v  
**Trade Name:** Amigo ULV  
**Type of formulation :** Ultra Low Volume  
**Chemical Name:**  
[1 $\alpha$  (S\*),3 $\alpha$  (Z)]-( $\pm$ )-cyano(3-phenoxyphenyl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate  
**Chemical Formula:** C<sub>23</sub>H<sub>19</sub>ClF<sub>3</sub>NO<sub>3</sub>  
**Molecular Weight:** 449.9

**PRODUCT COMPOSITION:**

<i>Active Ingredient:</i>	<i>% w/v</i>	<i>CAS #</i>
Lambda- cyhalothrin	4%	[91465-08-6]
<i>Inert ingredient:</i>	Up to 100%	

**HAZARDS IDENTIFICATION:**

**HEALTH EFFECTS**

**ACUTE TOXICITY**

Swallowed: NOT HARMFUL

Tests on rats indicate this product is HARMFUL following a single dose of a similar formulation.

(LD50 > 2000 mg/kg)



**Dermal absorption: NOT HARMFUL**

Tests on rats indicate this product is NOT HARMFUL following skin contact with a similar formulation.

(LD50 > 4000 mg/kg)

**Inhaled: VERY TOXIC**

Tests on rats indicate this product is VERY TOXIC due to inhalation of active ingredient.

(LC50 = 0.06 mg/L/4 hours)

**Irritation**

**Eye: SLIGHT IRRITANT**

**Skin: IRRITANT**

**Sensitisation**

**Skin: A POSSIBLE SKIN SENSITISER**

Poisoning symptoms:

Symptoms that may arise if the product is mishandled and overexposure occurs are nausea, vomiting, central nervous system depression, diarrhoea, abdominal pain, ataxia, unsteady gait, hyperexcitability, salivation, tremors and incontinence. Larger doses may cause convulsions and loss of consciousness. If the victim is uncoordinated there is a greater likelihood of vomit entering the lungs and causing subsequent complications.

Aspiration pneumonia (inflammation of the lung) may result. There may be tingling or numbness in exposed areas (paraesthesia). The effect may result from splash, aerosol or transfer to the face from contaminated gloves and hands. This effect is transient, lasting up to 24 hours.

**CHRONIC TOXICITY (Active Ingredient)**

Lambda-cyhalothrin technical has been extensively tested in mammals and in test-tube systems. No evidence of mutagenic, carcinogenic, neurotoxic or teratogenic effects was obtained. A three generation reproductive study in rats revealed minor reproductive effects at the highest dose only (100 mg/kg) (reduction in litter size and weight gain only). The aromatic hydrocarbon solvent may cause central nervous system depression and narcosis.

**FIRST-AID MEASURES:**

**If swallowed:** If poisoning occurs contact a doctor or Poisons Information Centre. DO NOT induce vomiting.

Give a glass of water. Seek immediate medical assistance.

**Eye contact:** If product gets in eyes wash it out immediately with copious quantities of water for 15 minutes. Seek medical advice.



**Skin contact:** If skin contact occurs remove contaminated clothing and wash affected areas thoroughly with soap and water. Wash contaminated clothing before re-use. The active ingredient may be absorbed through the skin with resultant toxic effects. Seek immediate medical advice.

**If inhaled:** Move person to fresh air and keep at rest until recovered. Remove any contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. If breathing laboured and patient cyanotic (blue) ensure airways are clear and have qualified person give oxygen through a face mask. If breathing has stopped, apply artificial respiration at once. In event of cardiac arrest, apply external cardiac massage. Seek medical attention.

#### **ADVICE TO DOCTOR**

No specific antidote exists. Treat symptomatically

#### **FIRE-FIGHTING MEASURES: -**

This product is combustible. Keep containers cool with water spray. Extinguish warehouse and factory fires using water fog (if unavailable use fine water-spray), foam, dry agent (carbon dioxide, dry chemical powder). During a fire this product may release smoke, hazardous decomposition products and toxic fumes. When fighting a major fire wear SCBA and structural fire fighters uniform. Do not allow fire-water to enter drains.

#### **ACCIDENTAL RELEASE:**

##### **SPILLS AND DISPOSAL**

In case of spillage it is important to take all steps necessary to:

- Avoid eye and skin contact.
- Avoid contamination of waterways.
- Shut off all possible sources of ignition. DO NOT smoke.

Procedure for spill:

- (1) Keep all bystanders away.
- (2) Wear full length clothing and PVC gloves.
- (3) Re-position any leaking containers so as to minimise further leakage.
- (4) Dam and absorb spill with an absorbent material (e.g. sand or soil).
- (5) Shovel the absorbed spill into drums.
- (6) Disposal of the absorbed material will depend upon the extent of the spill.
  - For quantities up to 50L of product bury in a secure landfill site.
  - For quantities greater than 50L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.



(7) Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.

## **STORAGE AND TRANSPORT:**

### **Storage:**

Store in closed, original container in a dry cool, well-ventilated area out of direct sunlight. Store in a locked room or place away from children, unauthorized persons, animals, food feedstuffs, seed and fertilizers.

Store and transport according to the requirements for a Class 9 dangerous good, C1 combustible liquid and a Schedule 6 poison.

### **Transport Classification – Sea (IMDG):**

UN No.: 3082 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE,

Class: 9 LIQUID, N.O.S.

Packing Group: III Additional Information: (CONTAINS LAMBDA-CYHALOTHRIN) MARINE POLLUTANT

## **PERSONAL PROTECTION/SAFTETY:**

### **ENGINEERING CONTROLS**

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Hygiene Standard. Use with local exhaust ventilation or while wearing organic vapour respirator. Keep containers closed when not in use.

### **PERSONAL PROTECTION**

#### **MANUFACTURE, PACKAGING AND TRANSPORT:**

Avoid skin and eye contact and the inhalation of vapor/mist.

Wear overalls, safety glasses and impervious gloves. If inhalation risk exists wear organic vapor respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Wash contaminated clothing and other protective equipment before storage or re-use. Always wash hands before smoking, eating, drinking or using the toilet.

#### **PREPARATION AND USE OF PRODUCT:**

Facial skin contact may cause temporary facial numbness. When using the product wear cotton overalls buttoned to the neck and wrist, a washable hat and elbow-length PVC gloves, face shield and goggles. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.



### PHYSICAL AND CHEMICAL PROPERTIES:

Appearance	: Colorless to light yellow liquid
Odor	: aromatic odor
Density	: 0.8 g/ml± 0.05
Flash point	: 48 °C

### TOXICOLOGICAL INFORMATION:

**Swallowed:** NOT HARMFUL

(LD50 > 2000 mg/kg)

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**Eye Irritation:** SLIGHT IRRITANT

**Skin Irritation:** IRRITANT

**Skin Sensitization:** A POSSIBLE SKIN SENSITISER

### CHRONIC TOXICITY (Active Ingredient)

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### ECOLOGICAL INFORMATION:

The active ingredient Lambda-cyhalothrin is very toxic to aquatic organisms. Contamination of waterways should be strictly avoided. DO NOT apply under weather conditions or from spraying equipment which could be expected to cause spray to drift onto adjacent areas, particularly streams, rivers or other waterbodies.

Rainbow Trout, *Oncorhynchus mykiss* , LC50 (96 h) = 0.44 µg/L

Sheephead minnow LC50 (96 h) = 0.81 µg/L

Bluegill Sunfish, LC50 (96 h) = 0.21 µg/L

Water Flea, *Daphnia magna*, LC50 (48 h) = 0.36 µg/L



Lambda-cyhalothrin is very toxic to bees (oral LD50 = 38 ng/bee, contact LD50 = 909 ng/bee) and practically non-toxic to birds (mallard duck: oral LD50 = >3950 mg/kg; bobwhite quail: dietary 3d LD50 = >7530 mg/kg).

Lambda-cyhalothrin, in common with other synthetic pyrethroids, has a high LogPOW of 7. However, since the compound is insoluble in water (thus limiting exposures to aquatic species) and is rapidly metabolised in animal systems the risk of bioaccumulation in an aquatic species is low. Leaching into ground water through a range of soil types is negligible. In soil it reportedly has a half life of up to 12 weeks.

### **DISPOSAL CONSIDERATIONS:**

Dispose of empty, used containers by:

- (a) Triple rinsing or preferably pressure rinsing containers with water. Add the rinsings to the spray tank. DO NOT dispose of undiluted chemicals on site.
- (b) If recycling, replace cap and return clean containers to recycler or designated collection point.
- (c) If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

