

## MATERIAL SAFETY DATA SHEET

### K-Othrine Chema 5% EC

#### SECTION 1. IDENTIFICATION OF THE SUBSTANCE & Manufacturer

Trade Name : K-Othrine Chema

-Common Name Deltamethrin

-Form: (EC)

-Chemical Name:

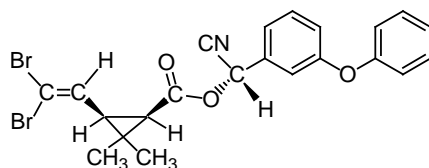
(S)- $\alpha$ -cyano-3-phenoxybenzyl (1R,3R)-3-(2,2-dibromovinyl)-2,2-dimethylcyclopropanecarboxylate *Roth*:

(S)- $\alpha$ -cyano-3-phenoxybenzyl (1R)-*cis*-3-(2,2-dibromovinyl)-2,2-dimethylcyclopropanecarboxylate

-Formula:  $C_{22}H_{19}Br_2NO_3$

-Mol. wt: 505.2

-Structure:



#### SECTION 2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No.: 52918-63-5

Content: 5%min.

Other: 95%max.

Substance	Conc.	Uses
<b>Active ingredient</b>		
Deltamethrin	5%	To control of flying insects ULV : 1:200 Fog : 1:3500
<b>Inert ingredient</b>		
surfactant	12%	
solvent	Up to 100%	
Total	100%	

### **SECTION 3. HAZARDS IDENTIFICATION**

---

#### **Effects of Overexposure**

Harmful if swallowed or inhaled, Symptoms of overexposure maybe include Burning sensation, Convulsions, Cough, Labored breathing, Shortness of breath, Sore throat, Abdominal pain, Cough, Headache, Dizziness, Nausea, etc. Skin and eye: redness and pain. Irritating to eyes and skin.

#### **Hazardous Decomposition Products**

Can decompose at high temperatures forming toxic gases.

### **SECTION 4.FIRST AID MEASURES**

---

#### **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.

#### **SKIN:**

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.

#### **INGESTION:**

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 do so by a poison control center or doctor.  
Do not give anything by mouth to an unconscious person.

#### **INHALATION:**

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.

#### **HINTS FOR THE PHYSICIAN:**

This product is a synthetic pyrethroid pesticide. If ingested and vomiting has not occurred, emesis should be induced with supervision.  
Keep patient's head below hips to prevent aspiration.  
If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

Note to physician: No specific antidote. Treat symptomatically.

## SECTION 5.FIRE FIGHTING MEASURES

---

<b>Flash point:</b>	>45°C
<b>Flammability:</b>	Not auto Flammable
<b>Extinguishing media:</b>	Foam, Carbon dioxide, Dry chemical
<b>Special fire fighting methods:</b>	Use self contained breathing apparatus

### **Unusual fire or explosion hazards:**

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

### **FIRE FIGHTING INSTRUCTIONS:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear.

Keep upwind. Isolate hazard area.

Avoid inhalation of smoke and fumes. Use water or foam to reduce fumes.

Do not touch spilled material.

If possible, move containers from area. Extinguish only if flow can be stopped.

Use flooding amounts of water as a fog.

Cool containers with flooding amounts of water from as far a distance as possible.

Avoid breathing vapors.

### **HAZARDOUS COMBUSTION PRODUCTS:**

May form toxic materials: Carbon dioxide and carbon monoxide, various hydrocarbons, etc.

## SECTION 6.ACIDENTAL RELEASE MEASURES

---

Use appropriate protective equipment. Spills should be cleaned up immediately.

Large spill: dike and pump as much as possible to a salvage container. Absorb the remaining liquid and any small spills with clay granules, sand or other absorbent material and sweep to a waste container. Cover the spill area with water and absorb. Minimize runoff into waterways or drains.

## SECTION 7.HANDLING AND STORAGE

---

### **HANDLING PRECAUTIONS:**

Harmful if inhaled. Avoid breathing vapor or spray mist.

Avoid contact with skin or clothing.

Contact with product may result in transient tingling and reddening of the skin that may persist for 24 hours.

Avoid contamination of feed and foodstuff.

Do not use water-based sprays of Buggslyer in conduits, motor housing, junction boxes, switch boxes or other electrical equipment because of possible shock hazard.

Wear long-sleeved shirt and long pants while applying this product through hose-end sprayer.

Food utensils, such as spoons and measuring cups, must not be used for food purposes after use in measuring pesticides.

Do not allow children or pets on treated areas until spray has dried.

**STORAGE PRECAUTIONS:**

Store in a cool, dry area away from children.

Do not transport or store below 32°F.

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

**WORK/HYGIENIC PRACTICES:**

Wash thoroughly with soap and water after handling and before eating drinking, chewing gum or using tobacco.

Remove contaminated clothing and wash clothing before reuse.

**SECTION 8.EXPOSURE CONTROL/PERSONAL PROTECTION**

---

**EYE PROTECTION:**

Not required with normal use, unless label directs otherwise.

**RESPIRATION/VENTILATION:**

Use in a well-ventilated area.

Vacate premise during use and ventilate before reoccupying.

**SKIN PROTECTION:**

Long-sleeved shirt and long pants while applying this product through hose-end sprayer.

**OTHER/GENERAL PROTECTION:**

Wash thoroughly with soap and water after handling.

Remove contaminated clothing and wash clothing before reuse.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

---

- Appearance: Light yellow transparent liquid with characteristic odor
- Melting point: 100-102 °C (tech.)
- Density 0.90
- PH: 0.4-0.5
- Corrosion: Non-corrosive
- Flash point >45°
- Contents -A.I.: Deltamethrin: 5 %

## SECTION 10. STABILITY AND REACTIVITY

---

**Chemical Stability:** Stable at normal temperatures and storage conditions.

**INCOMPATIBILITY:** Strong oxidizing agents and acids.

### **HAZARDOUS DECOMPOSITION PRODUCTS:**

May form toxic materials: Carbon dioxide and carbon monoxide, various hydrocarbons, etc.

### **OXIDATION/REDUCTION PROPERTIES:**

Product does not have the potential to act as a strong oxidizing or reducing agent.

**HAZARDOUS POLYMERIZATION:** Will not occur

## SECTION 11. TOXICOLOGICAL INFORMATION

---

Ingestion:	Acute Oral LD50 for rats 535mg/kg
Dermal:	Acute Dermal LD50 for rabbits >1782mg/kg
Inhalation:	LC50 for rats >4.9mg/l
Skin contact:	Irritating to skin (rabbits)
Eye contact:	Irritating to eye (rabbits)
Skin sensitization:	Not a skin sensitizer (Guinea pig)
Other:	Non-mutagenic, non-teratogenic; no adverse effect on reproductive performance. Not neurotoxin.
Toxicity class:	WHO (a.i.) II

### **CHRONIC/CARCINOGENICITY:**

General neurological symptoms were exhibited in studies with rats, mice and dogs.

These symptoms included unsteadiness, abnormal gait, tremors and liquid feces.

No histopathology findings were observed except some signs of slight hepatotoxicity in mice.

No Observable Effect Levels hepatotoxicity in mice.

No Observable Effect Levels (NOEL's) were 1 mg/kg/day in the 2-year rat and dog studies.

The NOEL for the 2-year mouse study was approximately 12 mg/kg/day.

Deltamethrin was not carcinogenic in rats or mice.

### **NEUROTOXICITY:**

Deltamethrin does not inhibit acetyl cholinesterase.

Neurobehavioral effects including unsteadiness, excessive salivation, vomiting, liquid feces, uncoordinated movement, tremors, spasmodic convulsions that are typically related to Central Nervous System (CNS) stimulation, were observed in some studies.

The NOEL for these studies was 1 mg/kg/day or higher.

**REPRODUCTIVE/DEVELOPMENTAL:**

No developmental effects were observed in studies with rats or rabbits in the absence of maternal toxicity.

The developmental NOEL for the rat study was 3.3 mg/kg/day while the developmental NOEL for rabbits was 25 mg/kg/day.

Reproduction studies with rats produced clinical signs, reduced body weight gain and mortality in parents and offspring at very high dosages.

The NOEL for the parents and offspring was 80 ppm or approximately 4 to 12 mg/kg/day for adults and 18 to 44 mg/kg/day for offspring.

**MUTAGENICITY:**

No evidence of genotoxicity was observed in a battery of in vitro and in vivo studies.

**SECTION 12. ECOLOGICAL INFORMATION**

---

This product is highly toxic to fish, aquatic organisms and honeybees, but practically non-hazardous because of its low recommended rate of use. Low toxic to birds, Acute LD50 for mallard duck >5000mg/kg. Keep out of lakes, streams, ponds, tidal marshes, and estuaries. Do not contaminate water by cleaning of equipment or disposal of equipment wash water.

**SECTION 13. DISPOSAL INSTRUCTION**

---

Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes are acutely hazardous. Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning. If allowed by state and local authorities, by burning. If burned, stay out of smoke.

**SECTION 14. TRANSPORT INFORMATION**

---

Transport Classification: Road & Rail (ADG), Sea (IMDG)

UN NO.: 3349

Shipping Name: Pyrethroid Pesticide, liquid, toxic, Flammable, N.O.S.  
(contains Deltamethrin)

UN class: 6.1

Packing Group: III

Other Info: Deltamethrin, Maring Pollutant

## **SECTION 15. REGULATORY INFORMATION**

---

Acute: Yes

Chronic: No

Fire: Fire

Reactivity: No

Read and follow all label directions.

## **SECTION 16. OTHER INFORMATION**

---

The data given here is based on current knowledge and experience. The purpose of this safety data sheet is to describe the products in terms of their safety requirements.