



**Material Safety Data Sheet (MSDS)**  
**Altima 80 EC**

**IDENTIFICATION OF THE SUPPLIER:**

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**PRODUCT IDENTIFICATION:**

**Common Name:**

Deltamethrin 1.5% w/v + S-Bioallethrin 0.5% w/v + Piperonyl butoxide 5% w/v

**Trade Name:** Altima 80 EC

**Type of formulation:** Emulsifiable Concentrate (EC)

**Chemical Name:**

Deltamethrin: (S) – a- cyano-3- phenoxybenzyl (1R, 3R)-3- (2,2 dibromovinyl) = 2,2- dimethyl cyclopropanecarboxy late.

S-Bioallethrin: (S)-3-allyl –2- methyl –4- oxocyclopent –2-enyle (1R,3R)-2.2 dimethyl –3-(2-methylprop –1- enyl) cyclopropane carboxylate.

Piperonyl butoxide (PBO): 5-[2-(2-butoxyethoxy)ethoxymethyl]-6-propyl-1,3-benzodioxole; 2-(2-butoxyethoxy)ethyl 6-propylpiperonyl ether.

**Chemical Formula:**

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

- S-Bioallethrin:  $C_{19}H_{26}O_3$

- Piperonyl butoxide (PBO):  $C_{19}H_{30}O_5$

**Molecular Weight:**

- Deltamethrin: 505.2

- S.Bioallethrin: 302.4

- Piperonyl butoxide (PBO): 338.4





## PRODUCT COMPOSITION:

<i>Active Ingredient:</i>	<i>% w/v</i>	<i>CAS #</i>
Deltamethrin	1.5 %	[52918-63-5]
S-Bioallethrin	0.5 %	[28434-00-6]
PBO	5 %	[51-03-6]
<i>Inert ingredient:</i>		
Emulsifier	6.5 %	--
Solvent	Up to 100%	--

## HAZARD IDENTIFICATION:

### ACUTE EFFECTS

Physical hazards: None

Health hazards:

**Inhalation:** Vapour or spray mist may be harmful if inhaled

**Eye:** Mild irritating to the eyes

**Skin:** Prolonged or repeated skin contact may cause irritation or sensitization

**Ingestion:** May be harmful if swallowed.

## FIRST-AID MEASURES:

### Swallowed:

Provided the patient is conscious, wash out mouth with water.

Do not induce vomiting should only be induced under the direction of a physician. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits. Immediately transport victim to an emergency facility

### Eye:

Irrigate for 20 minutes with copious quantities of water with eyelids held open. If irritation persists, repeat flushing. Seek medical attention immediately.

### Skin:

Remove contaminated clothing. Flush skin with running water for a minimum of 20 minutes. If swelling, redness, blistering or irritation occurs seek medical attention immediately.





**Inhalation:**

Remove victim to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth. If breathing is labored, give oxygen. Obtain immediate medical attention.

**Advice to doctor:**

This product contains materials that may cause severe pneumonitis if aspirated. If ingestion has occurred less than 2 hours earlier, carry out careful gastric lavage; use endotracheal cuff if available, to prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Give artificial resuscitation and appropriate chemotherapy if respiration is depressed. Symptomatic treatment and supportive therapy as indicated.

**FIRE-FIGHTING MEASURES: -**

**Fire and Explosion Hazards:**

Flash Point: 46 °C

Combustible liquid. Keep fire exposed containers cool by spraying with water.

**Extinguishing Media:**

For small fires, use foam, carbon dioxide or dry powder extinguishant. For large fires, use foam or water-fog; avoid use of water jet. Contain run-off water with for example, temporary earth barriers.

**Fire Fighting Instructions:**

Evacuate area and fight fire upwind from a safe distance to avoid hazardous vapors and decomposition products. Fire exposed containers can build up pressure and should be kept cool with water spray if possible. Explosive vapor could form from ruptured containers. Dike and collect water used to fight fire to prevent environmental damage due to run off. Foam or dry chemical fire extinguishing systems is preferred to prevent environmental damage from excessive water run off.

**Fire Fighting Equipment:**

A self-contained breathing apparatus with full face-piece.





## ACCIDENTAL RELEASE:

Contain spill and absorb with sand or proprietary absorbent (vermiculite). Prevent from entering drains, waterway or sewers.

Collect in sealed open top containers for disposal. Generously cover the contaminated areas with common, household detergent brush in a small amounts of water, work the detergent into the remaining spilled material forming slurry. Collect slurry in sealed open top container for disposal. This material is water pollutant and should be prevented from drainage systems and bodies of water.

### Disposal:

Triple rinse containers, add rinsate to the spray tank, then offer container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. On-site disposal of concentrate is not acceptable.

Wastes disposal should be carried out by industrial incineration or burial at a site approved by local authorities.

## PERSONAL PROTECTION/SAFETY:

### Engineering Controls:

Natural ventilation only required when handling the concentrate.

A local exhaust should be used in confined areas to keep the level of solvent within acceptable limits.

### Personnel Protection:

Eye Protection

Safety glasses or goggles

Clothing

Long sleeved shirt and long pants, shoes plus socks.

Gloves

Chemical resistant gloves

Respirator

All pesticide handlers must wear a respiratory protection device when working.

### User Safety Recommendations:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing if pesticide gets inside. Then wash thoroughly and put on clean clothing.





## HANDLING AND STORAGE:

Keep out of Reach of Children.

Use only in a well-ventilated area. Do not reuse empty containers. Keep the container closed when not in use. Keep away from food, feed and drinking water. Store in a wellventilated, dry place away from heat and other sources of ignition. Keep away from freezing.

## PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear, yellow liquid free of visible impurities.

**Odour:** Aromatic

**Density:** 0.9415 Kg/L

**Flash point:** 46°C

**Solubility in water:** emulsion in water

## STABILITY AND REACTIVITY

**Stability:**

Stable at room temperature.

**Incompatibility:**

Strong oxidizing agents. Acids and alkaline materials

**Hazardous polymerization:**

Will not occur.

**Conditions to avoid:**

Keep away from heat. Keep away from sources of ignition – No smoking.

**Hazardous Decomposition Products:**

Thermal decomposition products are toxic and may include hydrocarbons ammonia, organic and acid halides, Oxides of carbon, nitrogen and Sulphur.

## TOXICOLOGICAL INFORMATION:

**Altima 80 EC:**

LD50 Oral rat 7,273 mg/Kg

**Active Ingredient:**

LD50 Oral rat (Deltamethrin) 135 mg/Kg

LD50 Oral rat (S-bioallethrin) 784 mg/Kg

LD50 Oral rat (PBO) 7, 500 mg/Kg





## DISPOSAL CONSIDERATIONS:

### **Disposal Method:**

Do not contaminate ponds, waterways or ditches with chemical or used containers. Dispose of in facility permitted for hazardous waste.

