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PREPARED BY: U POTGIETER  
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# MATERIAL SAFETY DATA SHEET

# DELTANEX 15 EC

## 1. COMPANY DETAIL

**Name:** Avima (Pty) Ltd  
**Address:** No. 18 Aschenberg Street  
Chamdor  
Krugersdorp  
**Tel. Nr.:** (011) 769 1300  
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**Emergency Tel Nr.:** 083 326 3581 / 082 823 4473      **OR**      0800 172 743  
**Trade Name:** Deltanex 15 EC  
**Use:** An emulsifiable concentrate providing rapid flush-out and knockdown in the control of crawling insects in domestic and industrial areas.

## 2. PRODUCT IDENTIFICATION

**Chemical Family:** Deltamethrin (Pyrethroid)  
**Chemical Family:** Piperonyl Butoxide (Insect Synergist)  
**Chemical Name:** Deltamethrin:  
(S) –  $\alpha$  – cyano – 3 – phenoxybenzyl (1R, 3R) – 3 – (2, 2 – dibromovinyl) – 2, 2 – dimethylcyclopropane carboxylate  
PBO:  
5-[[2-(2-butoxyethoxy)ethoxy]methyl]-6-propyl-1,3-benzodioxole  
**Molecular Formula:** Deltamethrin:  $C_{22}H_{19}Br_2NO_3$   
PBO:  $C_{19}H_{30}O_5$   
**UN Nr.:** 3351  
**C.A.S. Nr.:** Deltamethrin: 52918 –63 –5  
PBO: 51-03-6

## 3. COMPOSITION

**Hazardous Components:** Deltamethrin 1.5 %  
PBO 4.3 %  
Inerts 94.2 %

#### 4. HAZARD IDENTIFICATION

Flammable liquid.  
Harmful by inhalation and if swallowed.  
Irritating to respiratory system.  
Risk of eye damage.  
May cause lung damage if swallowed.  
Repeated exposure may cause skin dryness or cracking.  
VERY toxic to aquatic organisms, and may cause long-term adverse effects in the aquatic environment.

#### 5. FIRST AID MEASURES

**Eye contact:** Immediately wash eyes with copious amounts of clean water for at least 15 minutes. Obtain medical attention if irritation develops and persists.

**Skin contact:** Remove contaminated clothing; rinse the affected skin area with plenty of soap and cold water or shower. Do not rub skin hard. Fatty creams and local anesthetic ointment may give some relief. If irritation persists, obtain medical attention.

**Ingestion:** Keep the patient calm and reassured. Rinse mouth with water. Ensure airway is clear. Do not induce vomiting to avoid risk of the product entering the lungs after ingestion. Never give anything by mouth to an unconscious person.

**Inhalation:** Remove the patient from the source of poisoning to a well ventilated area and keep him quiet and reassured. Do not apply direct mouth to mouth respiration, use a disposable mouthpiece. If necessary, administer artificial respiration and oxygen or closed chest cardiac massage by trained personnel.

#### **Notes to physician:**

#### **SYMPTOMS:**

**Local:** Skin and eye paraesthesia which may be severe, usually transient with resolution within 24 hours. Eye and mucous membrane irritation, cough.

**Systemic:** Discomfort in the chest, tachycardia, hypotension, nausea, abdominal pains, diarrhoea, vomiting, dizziness, blurred vision, headache, anorexia, somnolence, coma, convulsions, tremors, prostration.

**Risks:** This product contains a pyrethroid.  
Must NOT be confused with organophosphorous compounds.

**TREATMENT:**

Treatment: Local treatment: Initial treatment: symptomatic.

Systemic treatment: Initial treatment: symptomatic.

Monitoring of respiratory and cardiac functions.

Gastric lavage should be considered in cases of significant ingestions within the first 2 hours.

However, the application of activated charcoal and sodium sulphate is always advisable.

Keep respiratory tract clear.

Give oxygen or artificial respiration if needed.

In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens.

If not effective, phenobarbital may be used.

Contraindication: atropine.

Contraindication: derivatives of adrenaline.

There is no specific antidote.

Recovery is spontaneous and without sequelae.

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## 6. FIRE FIGHTING MEASURES

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**Extinguishing media:** Dry chemical, alcohol resistant foam, carbon dioxide. Do not use high volume water jet.

**Special hazards:** Flammable liquid – flash point >23 °C. Vapours may travel a considerable distance to a source of ignition and flash back. Toxic gases is possible in case of fire.

**Protective clothing:** Do not breathe fumes in case of fire. Wear self contained breathing apparatus for fire fighting if necessary.

**Specific Methods:** Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

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## 7. ACCIDENTAL RELEASE MEASURES

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**Personal Precautions:**

Wear suitable protective clothing, avoid inhalation and skin contact. Eliminate all ignition sources, no smoking in the vicinity.

**Environmental Precautions:**

Prevent contamination of sewers, waterways, low areas, drinking water, crops and other grazing. Toxic to fish, bees and wildlife.

Methods for cleaning up:

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder). Clean floors and contaminated objects with plenty of water.

**Prevention of secondary hazard:**

No smoking near naked flames. Inspect for damaged containers and take the necessary precautions. Use water spray to disperse the vapours and protect personnel attempting to stop the leak.

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## 8. HANDLING AND STORAGE

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**Handling /storage precaution:**

Flammable liquid. DO NOT STORE NEAR FLAMES, SPARKS OR HOT SURFACES. Do not inhale spraymist. Wear protective clothing when handling the concentrate or dilutions. Wear a face shield when applying the diluted washes to surfaces or when working in spray mist. Avoid skin contact and wash splashes from skin or eyes immediately. Wash with soap and water after use. Wash contaminated clothing daily. Do not use in the presence of persons with known sensitivity to pyrethroids. In the case of signs of sensitivity, obtain medical advice. Do not eat, drink or smoke while mixing or applying or before washing face and hands. Do not spray directly onto foodstuffs or surfaces on which food is stored, processed or eaten. Prevent contamination of food, feedstuffs, drinking water, eating utensils and food preparation equipment.

Storage temperature: 0- 25 °C

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## 9. EXPOSURE CONTROLS /PERSONAL PROTECTION

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Ensure that effective ventilation is maintained while handling the product. Wear effective respiratory protection or self contained breathing apparatus. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practical steps have been taken to reduce exposure at source e.g. containment and / or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance. Wear protective clothing when handling the product.

Wear gloves and barrier cream on exposed skin. Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet. Wear goggles. Face shield and full length protective clothing and boots must be worn. Wash exposed skin area, face and hands after use. Avoid inhalation and skin contact. Wear two layers of clothing whenever possible. Polyester / cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.

## 10. PHYSICAL AND CHEMICAL CHARACTERISTICS

**Appearance:** Clear, yellow  
**Form:** Emulsifiable concentrate liquid  
**Product stability:** Stable  
**Explosive properties:** None  
**Flash point:** 43 °C  
**Solubility in water:** Emulsifiable with water

## 11. STABILITY AND REACTIVITY DATA

**Conditions to avoid:** Extremes of temperature and direct sunlight.  
**Hazardous reactions:** No hazardous reactions when stored and handled according to prescribed instructions. Stable under recommended storage conditions.

## 12. TOXICOLOGICAL INFORMATION

	<b>Piperonyl Butoxide</b>	<b>Deltamethrin</b>
Acute oral LD50:	Rat: 7500 mg/kg	>2000 mg/kg
Acute dermal LD50:	Rat: >7950 mg/kg	2000 mg/kg
Inhalation:	Rat: >5.9 mg/l	2.2 mg/l

## 13. ECOLOGICAL INFORMATION

### Very toxic to aquatic organisms.

Birds: Mallard ducks >4640 mg/kg  
Fish: Toxic to fish under laboratory conditions  
Daphnia: 3.5 ug/l  
Algae: >9.1 mg/l  
Bees: Toxic to bees (oral) 79 ng/bee (contact) 51 ng/bee  
Worms: >1290 mg/kg soil

## 14. DISPOSAL CONSIDERATION

**Disposal methods:** Soak up liquid spillage with dry sand, sweep up and dispose of as if toxic and flammable waste in accordance with local / national regulations.

Residue to be disposed of as if toxic and flammable waste in accordance with local / national regulations.

**Disposal packaging:** Invert the empty container over the spray or mixing tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of 1 % of that of the container. Add the rinses to the contents and the spray tank and destroy the empty container by perforation and flattening and dispose of as toxic waste in accordance with local / national regulations. Do not use for any other purpose.

## 15. TRANSPORTATION DATA

**UN Number:** 3351  
**Hazardous Description Label:** Pyrethroid pesticide, liquid, toxic, flammable, # flash point  $\geq 23$  °C  
**UN Hazard Class:** 6.1  
**UN Packing Group:** III  
Marine Pollutant

## 16. REGULATORY INFORMATION

**Risk phrases:**

R10	Flammable
R20/22	Harmful by inhalation and if swallowed
R37	Irritating to respiratory system
R41	Risk of serious damage to eyes
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful, may cause lung damage if swallowed
R66	Repeated exposure may cause skin dryness or cracking.

**Safety phrases:**

S26	Incase of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S35	This material and its container must be disposed of in a safe way.
S39	Wear eye and face protection.
S2	Keep out of reach of children
S13	Keep away from food, drink and feeding stuff
S20	When using do not eat or drink
S21	When using do not smoke
S49	Keep in the original container
S57	Use appropriate container to avoid environmental contamination
S62	If swallowed, do not induce vomiting, seek medical advice immediately

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