



## MATERIAL SAFETY DATA SHEET

### ***BITRAD AK47 (Lambda-cyhalothrin)***

- AGRICULTURAL PRODUCTS
- TECHNICAL MANAGEMENT
- TRADING
- PACKAGING

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### **1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/ UNDERTAKING**

**SUPPLIER:** BITRAD CONSULTING (PTY) LTD  
PO Box 51454  
Wierda Park  
0149

#### **EMERGENCY TELEPHONE NUMBERS**

##### **SPILLAGES:**

**Emergency telephone** (+27) 012 6668945 or  
083 228 0258

**Fax** (+27) 012 6669958

##### **POISONINGS:**

**National Poison Centre** 021-9386084 (office hours).  
021-9316129 (after hours).  
0800 333 444 (24 H)

**UOFS Pharmacology/Toxicology information centre:**  
0824910160

**Product Name:** BITRAD AK47

**Issue Date:** October 2004  
**Ref:** Bitrad AK47 100 WP MSDS 2004  
**Revised:** N/A (REV 0)

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

#### **Components contributing to hazard**

		CAS
Lambda-Cyhalothrin	100 g/kg WP	91465-08-6

**Inert ingredients :** Not available

**Balance :** N/A

**Composition Code** -

*The information herein is given in good faith and to the best of our knowledge. However, no warranty is expressed or implied.*

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## 3. HAZARDS IDENTIFICATION

Slight irritant to human skin and moderate irritant to the eyes. The product may cause numbness or tingling (paraesthesia) in exposed areas.

The product is very toxic to fish and toxic to bees on contact.

The product is slightly toxic to birds.

It may form flammable dust clouds in the air.

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## 4. FIRST-AID MEASURES

**Ingestion:** If swallowed, induce vomiting. Keep at rest. Treat symptomatically and supportively. Get prompt medical attention.

**Inhalation:** Immediately remove the affected victim from exposure to an area of fresh air. Administer artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device if breathing is stopped. Keep at rest. Call for prompt medical attention.

**Eyes:** Flush eyes with large amount of water for +- 15 minutes until irritation subsides. If irritation persists, get medical attention.

**Skin:** Remove grossly contaminated clothing, including shoes, and launder before reuse. Flush with large amount of water; use soap or detergent if available. Call for prompt medical attention if irritation or pain persists. Vitamin e topical application is highly effective in relieving paresthesia.

**Note to physician:** If the intake amount of the product is predicted to be less than the lethal dose, then observe the patient and treat him/her symptomatically. If gastric lavage is considered necessary, prevent aspiration of gastric material. Consider to treat the patient with activated charcoal and laxative.

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## 5. FIRE-FIGHTING MEASURES

This product can cause flammable dust clouds at elevated temperatures. Keep containers, that is exposed to fire, cool by spraying it with water.

Flash Point: Not applicable

Autoignition temp: None

Flammability limits in air ( % by vol):

Lower: N/A

Upper: N/A

### Firefighting media

Use CO<sub>2</sub>, Foam or dry chemical to extinguish the fire. DO NOT use water because run-off water can contaminate environment.

### Firefighting precaution

Firefighter must wear self-contained breathing apparatus, with full-face mask and full protective equipment.

### Personal Precautions

Wear appropriate safety clothing and eye/face protection (see Section 8).



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## **6. ACCIDENTAL RELEASE MEASURES**

### **Steps to be taken if material is released**

Cover spilled product with damp earth, sand or other non-combustible material and transfer to containers. DO NOT GET WATER INSIDE CONTAINERS. Remove contaminated soil as much as possible (shovel up and sweep up). Place in closed, labeled containers and store in a safe place to await proper disposal. Do not contaminate water while cleaning equipment or disposing of wastes. Persons performing this work should wear adequate personal protective equipment and clothing.

### **Cleaning of equipment**

Wash with plenty of water. Do not contaminate water while cleaning equipment or disposing of wastes.

### **Additional Information**

Any spillages into water courses must be reported to either the local Department of Water Affairs or the local Environment Authority.

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## **7. HANDLING AND STORAGE**

### **Handling**

Practise good personal hygiene. Do not consume or store food in the work area. Wash hands and exposed skin before eating, drinking or smoking and after work. Avoid eye and skin contact. Avoid breathing dust or spray mist. Do not apply, drain, or flush equipment on or near desirable trees or other plants.

### **Storage**

The formulation is stable if stored in an airtight container and free of moisture and high humidity. Keep out of reach of children. Do not contaminate water, food, or feed by storage or disposal. Keep from contact with fertilizers, herbicides, fungicides, and seeds during storage.

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## **8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **Engineering Controls**

Use only with adequate ventilation.  
Good general ventilation should be sufficient for most conditions.  
Local exhaust ventilation may be necessary for some operations.  
Control airborne concentrations below the exposure guideline.

### **Respiratory Protection**

When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved air-purifying respirator.

For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

### **Hand/Skin Protection**

Use protective clothing impervious to this material. (Long-sleeved shirt and long pants. Shoes plus socks). Selection of specific items will depend on operation.

### **Eye/Face Protection**

Use safety mask.



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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Off-white to light greyish powder.  
Odour: No specific odour.  
Bulk density: 0.4 – 0.5 g/ml  
Water solubility: Insoluble in water.

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## 10. STABILITY AND REACTIVITY

### Chemical Stability

Store in well-closed containers at a temperature less than 40°C, preferably between 15-30°C. It is unlikely to be used with other pesticides but it is compatible with most WP and EC pesticides. Compatibility must be tested beforehand.

### Conditions to Avoid

Avoid extremes of temperature. Avoid the situation of having product dust clouds close to flame or spark sources, as it may be flammable.

### Hazardous Decomposition Products

Fire may produce irritating, corrosive and/or toxic gases.

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## 11. TOXICOLOGICAL INFORMATION

### Acute Oral LD50 (male rat)

> 790 mg/kg

### Acute Dermal LD50

> 12 930 – 15 070 mg/kg (rabbit)

### Skin irritation

Mild skin irritant.

### Sensitisation

Not a skin sensitizer in animals (guinea pig).

### Eye Irritation

Mild eye irritant.

### Inhalation LC50

> 0.6 mg/l/4 HOURS (rat, formulation)

### Other Information

Lambda-Cyhalothrin is **not teratogenic**.

Lambda-Cyhalothrin is **not mutagenic**.

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## 12. ECOLOGICAL INFORMATION

**Breakdown in soil and groundwater:** Lambda Cyhalothrin has a relatively high persistence in the soil environment. In water sediment mixtures in sunlight it is rapidly degraded.

**Breakdown in water:** Breakdown of Lambda-cyhalothrin in water is very slow.

**Breakdown in vegetation:** Lambda-cyhalothrin is not supposed to be applied onto plants.



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## GENERAL TOXICITY TO WILDLIFE AND FISH: (formulation)

### Birds

Lambda-cyhalothrin is slightly toxic to birds.

Acute Oral LD50                    39 g/kg for mallard duck.  
Oral dietary LC50 of            > 50 g/kg for bobwhite quail and mallard duck.

### Fish

Lambda-cyhalothrin is highly toxic to fish and aquatic invertebrates.

LC50 (96 hr)            = 2.4 µg/l for rainbow trout.  
                              = 2.1 µg/l for bluegill sunfish.

### Daphnia

LC50 (48 hr) = 3.6 µg/l

### Effects on other organisms

Lambda-cyhalothrin is highly toxic to bees. (9090 ng/bee on contact)

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## 13. DISPOSAL CONSIDERATIONS

Do not contaminate ponds, waterways or ditches with chemical or used container. Wash out thoroughly. Container and washings must be disposed of safely and in accordance with applicable regulations. The preferred options are to send to licensed reclaimer or to permitted incinerators. Do not re-use container for any purpose.

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## 14. TRANSPORT INFORMATION

Proper Shipping Name: PYRETHROID PESTICIDE, SOLID, TOXIC  
UN NO: 3349  
Hazard Class: 6.1  
Packing Group: III  
ERG 151

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## 15. REGULATORY INFORMATION

**Classification :** Irritant

### Risk Phrases :

R 36. Irritating to eyes.

### Safety Phrases :

S 2. Keep out of reach of children.  
S13. Keep away from food, drink and animal feedstuff.  
S20/21. When using do not eat, drink or smoke.  
S22. Do not breath dust.  
S26. In case contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S 37. Wear suitable gloves.



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## **16. OTHER INFORMATION**

### REFERENCES:

- Bitrad MSDS.
- Cornell University, lambda-cyhalothrin
- SABS Dangerous Goods documentation
- Dangerous Goods Regulations, IATA, 42<sup>nd</sup> Edition, Effective 1 January 2001.
- EXTOXNET
- BCPC – Pesticide Manual
- Safety and Risk phrases website.

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**END OF MSDS.**

