

# MATERIAL SAFETY DATA SHEET

## K-O Tab® WT Residual Insecticide Tablet

Date of Issue: September 14<sup>th</sup>, 2006

### 1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND SUPPLIER

**Product name:** K-O Tab® WT Residual Insecticide Tablet  
**Other names:** K-O Tab Insecticide Treatment for Mosquito Bed-nets  
**Product code:** 5861658 (1.6 g)  
**Chemical group:** Pyrethroid  
**Recommended use:** A water dispersible tablet for mixing with water and use as a residual spray or for treating mosquito nets.  
**Formulation:** Tablet  
**Supplier:** Bayer Environmental Science – A Business Group of Bayer CropScience Pty Ltd  
ABN 87 000 226 022  
**Address:** 391 - 393 Tooronga Road, East Hawthorn  
Victoria 3123, Australia  
**Telephone:** (03) 9248 6888  
**Facsimile:** (03) 9248 6800  
**Website:** [www.bayercropscience.com.au](http://www.bayercropscience.com.au)  
**Contact:** Technical Manager (03) 9248 6888  
**Emergency Telephone Number:** 1800 033 111 – Orica SH&E Shared Services

### 2. HAZARDS IDENTIFICATION

**HAZARDOUS SUBSTANCE - NON-DANGEROUS GOOD**  
Toxic by inhalation and if swallowed. Not flammable.

**Hazard designation:** Hazardous (National Occupational Health and Safety Commission - NOHSC)  
**Risk phrases:** R23/25 – Toxic by inhalation and if swallowed  
**Safety phrases:** See Sections 4, 5, 6, 7, 8, 9, 13  
**ADG classification:** Not a "Dangerous good" for transport by road or rail according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. For transport by sea, K-O Tab WT Insecticide Tablet is a MARINE POLLUTANT. See Section 14.  
**SUSDP classification:** Schedule 5 (Standard for the Uniform Scheduling of Drugs and Poisons)

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Concentration (g/kg):
Deltamethrin	[52918-63-5]	250
Other ingredients	(Non hazardous)	750

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### 4. FIRST AID MEASURES

**If poisoning occurs, immediately contact a doctor or Poisons Information Centre (Telephone 13 11 26), and follow the advice given. Show this Material Safety Data Sheet to a doctor.**

- Inhalation:** The presentation as a solid tablet cannot, under normal handling, expose the user to the risk of contamination by inhalation.
- Skin contact:** If product of prepared spray or dip contacts skin wash area with soap and water. Symptoms can be partially alleviated by the application of a vitamin E or moisturising cream or anaesthetic ointment.
- Eye contact:** The presentation as a solid tablet cannot under normal handling expose the user to contact with the eyes. Should spray or dipping solution contact eyes rinse immediately with plenty of water for at least 15 minutes, holding eye open. Seek medical advice. Alleviate symptoms by instilling local anaesthetic drops e.g. 1% amethocaine hydrochloride eye drops.
- Ingestion:** Wash out mouth with water. Seek medical advice. If swallowed do not induce vomiting, give a glass of water and seek medical advice. Ensure airway is clear.
- First Aid Facilities:** Provide washing facilities in the workplace.
- Symptoms:** Local symptoms include skin and eye paraesthesia which may be severe (usually transient with resolution within 24 hours), eye and mucous membrane irritation, cough. Systemic symptoms include discomfort in the chest, bronchial hypersecretion, pulmonary oedema, tachycardia, low blood pressure, palpitation, nausea, vomiting, diarrhoea, abdominal pain, salivation, dizziness, blurred vision, headache, apathy, anorexia, somnolence, coma, spasm, convulsions, tremors, ataxia, muscular fasciculation.
- Medical attention:** Apply basic aid and decontamination procedures. Treat symptoms. There is no specific antidote.
- Note to physicians  
The presenting signs of overexposure usually relate to hyperaesthesia of nerve endings in skin and mucous membranes exposed to the chemical. These signs can only be treated symptomatically and resolve spontaneously within 24-48 hours. The skin and mucous membrane hyperaesthesia results from direct contact, not from systemic distribution of the chemical.
- Treat large intakes with gastric lavage, and charcoal administration. Use endotracheal intubation, and artificial respiration (if necessary). In cases of severe ingestions, cardiac and respiratory function should be monitored. In case of convulsions, diazepam is the anticonvulsant of choice. Thus seizure management should follow standard practice using benzodiazepines (with oxygen and airway protection), if insufficiently effective followed by Phenobarbital infusion as required for status epilepticus. A suggested regimen would be: Start with 10 to 30 mg diazepam by intravenous injection according to body weight, for children pro rata. This dose is to be repeated every 10 to 30 minutes according to the patient's response.
- Contraindications: adrenergic compounds (except for CRP) and high dose atropine. Pyrethroid poisoning should not be confused with carbamate or organophosphate poisoning.

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### 5. FIRE FIGHTING MEASURES

- Extinguishing media:** Water spray, carbon dioxide, foam, and dry chemical. Do not use a water jet from a fire hose.
- Hazards from combustion products:** Heating/combustion will generate hydrogen cyanide, hydrogen bromide, oxides of carbon and nitrogen, and other irritant and toxic fumes.
- Precautions for fire fighters:** Fire fighters should wear full protective clothing and respiratory protection. In well ventilated areas wear full face mask with combination filter, eg., ABEK-P2 (offers no protection from carbon monoxide). In enclosed premises use a respirator with independent air supply. Do not release contaminated water into the environment. Keep intact containers cool by spraying with water.

### 6. ACCIDENTAL RELEASE MEASURES

If packaged tablets are spilled return to original container. Avoid damaging packaging. If immediate packaging has been damaged sweep up into a suitable container, store and dispose of at a local authority landfill. If no landfill is available bury below 500mm in a disposal pit specifically designed and set up for this purpose clear of waterways, desirable vegetation and tree roots.

### 7. HANDLING AND STORAGE

- Handling:** Prepare spray and dipping solution in a well-ventilated area
- Storage:** Store product in the closed, original container in a safe, cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Exposure standards:** No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia). Bayer recommends an Occupational Exposure Standard for deltamethrin of 0.28 mg/m<sup>3</sup>.
- Engineering controls:** No special ventilation is required, as this product is not volatile. Control process conditions to avoid contact.
- Personal Protective Equipment:**
- |              |  |
|--------------|--|
| Eyes:        | Avoid contact with eyes.   |
| Clothing:    | Full-length work-clothes should be worn during use.  |
| Gloves:      | Waterproof gloves should be worn during use.   |
| Respiratory: | Not required.  |
| Other:       | Do not eat, drink or smoke until after washing. Wash thoroughly after handling. After use wash or dispose of gloves and wash contaminated clothing |

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	A beige coloured tablet
Odour:	Slight characteristic odour
Vapour pressure:	124 µPa at 25 °C (deltamethrin)
Vapour density:	Not applicable
Boiling point:	Not applicable
Freezing/melting point:	Not applicable
Solubility:	<0.00002 g/L at 25 °C (deltamethrin)
Suspensibility of 1 tablet:	95 % minimum
Density:	Not applicable
pH:	4.0 – 6.0 (1% in water)
Flash Point:	Not applicable
Flammability (explosive) limits:	Not applicable
Octanol/water partition coefficient:	Log Pow: 4.6 at 25 °C (deltamethrin technical)
Formulation:	WT – water dispersible tablet

### 10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Hazardous polymerisation:	Not known to produce hazardous reactions.
Conditions to avoid:	Extreme heat
Incompatible materials:	Avoid oxidising agents, strong acids and alkalis.
Hazardous decomposition products:	Heating/combustion will generate hydrogen cyanide, hydrogen bromide, oxides of carbon and nitrogen, and other irritant and toxic fumes.

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### 11. TOXICOLOGICAL INFORMATION

#### POTENTIAL HEALTH EFFECTS

<b>Inhalation:</b>	Inhalation of the product is unlikely to occur due to the formulation type.
<b>Skin contact:</b>	The product is considered to be non-irritant and non-sensitising to the skin.
<b>Eye contact:</b>	May irritate the eyes.
<b>Ingestion:</b>	Product is harmful if swallowed. Systemic symptoms include discomfort in the chest, bronchial hypersecretion, pulmonary oedema, tachycardia, low blood pressure, palpitation, nausea, vomiting, diarrhoea, abdominal pain, salivation, dizziness, blurred vision, headache, apathy, anorexia, somnolence, coma, spasm, convulsions, tremors, ataxia, muscular fasciculation.
<b>Other:</b>	None

#### ANIMAL TOXICITY DATA – PRODUCT

##### Acute:

<b>Oral toxicity:</b>	LD <sub>50</sub> rat: 1965 mg/kg
<b>Dermal toxicity:</b>	LD <sub>50</sub> rat: > 2000 mg/kg
<b>Inhalation toxicity:</b>	N/A
<b>Skin irritation:</b>	Not irritating – rabbit
<b>Eye irritation:</b>	Irritating – rabbit
<b>Sensitisation:</b>	Not sensitising - guinea pig

##### Chronic:

Deltamethrin is not mutagenic, carcinogenic or teratogenic.

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### 12. ECOLOGICAL INFORMATION – ACTIVE INGREDIENT

Deltamethrin is highly toxic to fish and aquatic organisms.  
Do not contaminate streams, rivers or waterways with the product or used containers.

**Fish toxicity:** LC<sub>50</sub> (96h): 0.33 mg/L (Zebra fish)

**Daphnia toxicity:** EC<sub>50</sub> (48 hr): 0.000105 mg/L

**Toxicity to algae:** EC<sub>50</sub> (96hr): 41.7 mg/L

**Bird toxicity:** LD<sub>50</sub>: > 4640 mg/kg mallard duck (deltamethrin technical)

LD<sub>50</sub>: > 2250 mg/kg bobwhite quail (deltamethrin technical)

**Bee toxicity:** Deltamethrin is toxic to bees.  
LD<sub>50</sub> (oral) 79 ng/bee; (contact) 51 ng/bee

**Environmental fate, persistence and degradation:** Deltamethrin is not persistent in the environment. It is degraded by soil microorganisms and does not leave residues in the environment or build up in the food chain.

### 13. DISPOSAL CONSIDERATIONS

Dispose of tablet wrapper by wrapping in paper, placing in a plastic bag and putting in the garbage. After use, puncture or shred the bag and the disposable gloves and dispose of in household garbage as above. Dispose of spent dip by pouring over bare-soil or around non-food producing plants in the home garden. DO NOT contaminate streams, rivers or waterways with the tablet or dip solution.

### 14. TRANSPORT INFORMATION

**UN number:** Not applicable (road and rail)

**Proper shipping name:** Not applicable (road and rail)

**Class and** Not applicable (road and rail)

**Subsidiary Risk:**

**Packing Group:** Not applicable (road and rail)

**EPG:** Not applicable (road and rail)

**Hazchem code:** Not applicable (road and rail)

**Marine pollutant:** Yes - If this product is shipped by sea it is a Class 9 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S (contains deltamethrin), UN 3077, Packing Group III.

### 15. REGULATORY INFORMATION

Registered according to the Agricultural and Veterinary Chemicals Act 1988

Australian Pesticides and Veterinary Medicines Authority Approval Number: 55992

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### 16. OTHER INFORMATION

**Trademark information:** K-O Tab® is a Registered Trademark of Bayer.  
**Preparation information:** Replaces October 26, 2004 edition.  
Reason for update: Risk phrases, ADG Classification, Marine pollutant status, Ecological information.

**Data sources:** Bayer CropScience Pty Ltd product safety data and published data

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

END OF MSDS