

**CS Formulation:** Capsule Suspension (CS)  
Non-flammable

**A synthetic pyrethroid insecticide for the control of red, spiny and African bollworms and certain other pests in cotton; cutworm in all crops excluding cotton but including tobacco; African armyworm in pastures and various pests in horticultural crops as listed.**

**Chemical groups:**  
lambda-cyhalothrin is a Pyrethroid

**TRB Certificate No.: 10-13-D-59**

® = Registered Trademark of a Syngenta Group Company

LXXXXXXXX ZIMB/04X PPE XXXXXXX



**Karate Zeon**

5 CS

syngenta.

Reg. No.:  
06-D-136-15

**250 ml**



**DANGER**

**POISON**

**COMPOSITION: (mass/volume)**

Lambda-cyhalothrin: ..... 50 g/litre

Inert ingredients:..... to 1 litre

**BEFORE YOU OPEN THE CONTAINER  
READ THE ENTIRE LABEL.**

**Date of manufacture/Batch No:**

Refer to inkjet print.

**Shelf Life:** 2 years if stored in a cool dry place at constant temperatures in original unopened container.

**Emergency Call Number:**

Swiss Toxicological Information Centre  
(24 h) +41 44 251 51 51

**Manufacturer:** Syngenta Crop Protection AG,  
Basel, Switzerland

**Registered by: Syngenta Agro AG**

32 Sandringham Drive,  
Alexandra Park, Harare

Tel.: 08677005432 / 08677005434

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**TO CAUSE A HAZARD IN THE USE, STORAGE OR DISPOSAL OF THIS SUBSTANCE IS AN OFFENCE.**

**PRECAUTIONS**

- Handle with care; avoid splashing/contact; poisonous by swallowing, inhalation and contact with the skin.
- Wear suitable protective clothing, i.e. for mixing – impermeable gloves, overalls, eye/face protection; for application - overalls, hat, and solid footwear.
- DO NOT CONTAMINATE DRINKING POOLS, DAMS, RIVERS, WATERWAYS AND OTHER WATER SUPPLIES.
- DANGEROUS TO FISH AND BEES.
- KEEP OUT OF REACH OF CHILDREN.
- KEEP APART FROM FOOD, FOODSTUFFS, seeds and fertilizers.
- Do not eat, drink or smoke while handling this product.
- Store in original container in a cool, dry place and keep under lock and key
- Use only on the crops for which the product is registered.

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- Avoid drift onto adjacent crops or soil.
- On completion of mixing or spraying, remove protective clothing and wash entire body and change clothing.
- Decontamination of Sprayer – after use, clean the sprayer thoroughly and ensure that all traces of **Karate Zeon® 5 CS** are removed. Make use of the following method: (a) Drain tank and then rinse tank, sprayer boom and hoses with clean water for at least 10 minutes. (b) Fill tank with clean water and add to it 1,0 litre household bleach (5%) or 1,5 litres household bleach (3,5%) per 200 litres of water. Rinse hoses and sprayer boom and leave in the tank for 15 minutes whilst agitating. Drain through the nozzle outlets. (c) Repeat step (b) and thereafter, rinse thoroughly with clean water and dispose of the wash water at a site designated for the disposal of pesticides.
- Empty container disposal – invert the empty container over the spray tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container 3 times with a volume of water equal to at least 10% of that of the container. And the rinsate to the contents of the spray tank. Destroy the empty container by perforation and flattening. Place it in a secure disposal area and offer it for recycling. DO NOT use it for any other purpose.

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### **SYMPTOMS OF POISONING**

Following ingestion, nausea, vomiting, abdominal pain and diarrhoea may occur. May cause tingling/numbness in exposed areas (paraesthesia). The effect is transient, may be lasting up to 24 hours.

### **FIRST AID**

**Eye contact:** Splashes of the concentrate can harm your eyes. If you get it in your eyes, wash it out at once. Hold eyelids apart and pour in a gentle stream of water for 10 to 15 minutes.

**Skin contact:** Splashes of the concentrate can irritate your skin. Wash splashes from your skin at once. Remove contaminated clothing; wash affected skin with soap and water.

**If inhaled:** Move to clean air.

**If swallowed:** DO NOT induce vomiting. Seek medical advice immediately if a large volume of concentrate was ingested.

**Note:** Never give anything by mouth to an unconscious patient.

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### **NOTE TO PHYSICIAN**

If gastric lavage is performed, take care to prevent aspiration of gastric contents. Consider administration of activated charcoal and a laxative.

**No specific antidote is known.** Apply symptomatic therapy.

### **USER'S RISK**

The user bears the risk for damage resulting from factors beyond the manufacturer's control. All recommendations for use of the product are based on the current state of the manufacturer's knowledge. Since the manufacturer cannot control the application, use, or storage of the product, the manufacturer cannot accept responsibility therefore.

Since the occurrence of resistance cannot be foreseen, the manufacturer accepts no responsibility for any loss or damage to crops resulting from failure of **Karate Zeon® 5 CS** to control a resistant strain of the target pest.

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## PRODUCT INFORMATION

### Mode of Action and Spectrum of Activity

**Karate Zeon® 5 CS** is a pyrethroid insecticide which disrupts sodium channel modulators. It offers rapid knockdown, residual control and anti-feeding and repellency properties against some pests.

**Karate Zeon® 5 CS** is not systemic in plants.

### INSECTICIDE RESISTANCE MANAGEMENT (IRM)

**Karate Zeon® 5 CS** a Group 3A insecticide, based on the Insecticide Resistance Action Committee (IRAC) Mode of Action classification. Repeated and exclusive use of **Karate Zeon® 5 CS** or other Group 3A insecticides may create resistant insect populations. Follow these recommendations to prevent or delay the development of insecticide resistance to **Karate Zeon® 5 CS**:

- Do not apply more than the recommended applications of **Karate Zeon® 5 CS** per season for any crop. Refer to “Directions for use” for the particular crop guidelines.

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- Apply **Karate Zeon® 5 CS** or other Group 3A insecticides using a “window” approach to avoid exposure of multiple successive pest generations to the same mode of action. A window is defined as the period of residual activity with insecticides of the same mode of action within an approximate 30 day period.
- Two successive applications of **Karate Zeon® 5 CS** may be made within a treatment window to protect new growth or control high pest populations.
- Following a window of use with **Karate Zeon® 5 CS** or other Group 3A insecticides, rotate to a window using effective insecticides with a different mode of action.
- Incorporate IPM practices (cultural and biological control) into the pest management program.
- Monitor insect populations for loss of field efficacy.
- Target the most sensitive life stage of the pest, typically small larvae.
- If you experience difficulty with control, and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternate method of control for your area.

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## DIRECTIONS FOR USE.

### Warnings

#### PRE HARVEST INTERVALS

Minimum number of days between last application and harvesting:

Green beans, Cucurbits, Lettuce, Cotton .....	1 day.
Tomatoes .....	2 days.
Berries, Brassicas, Peas, Onions, Potatoes .....	3 days.
Dry beans, Maize, Sweetcorn, Macadamia .....	7 days.
Tobacco .....	14 days.
Grazing crops .....	28 days.

### Compatibility

**Karate Zeon® 5 CS** is compatible with most insecticides and fungicides. As compatibility can be adversely

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affected by the quality of the water used in the mixture, the manufacturer recommends that a trial mixture be done using the water intended for spraying.

### Mixing

Half-fill the sprayer tank with clean water. Shake the **Karate Zeon® 5 CS** container well. Add the recommended volume of **Karate Zeon® 5 CS** to the water while agitating. Top-up the tank with the required volume of water.

Always stir the spray mixture well and apply within a few hours. Do not prepare more spray mixture than is needed for the immediate operation.

### Application

In all cases, apply as a full cover spray. Avoid run-off. Make sure the equipment is properly calibrated to give even distribution at the correct volume. Do not spray during the hot hours of the day, if the foliage is wet or if rain is imminent or if windy.

Spray intervals: Depend on scouting results.

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## RATES

CROP	PEST	RATE			APPLICATION DIRECTIONS	
		Plant Height	40 – 90 cm	Over 90 cm		
Cotton	Red, Spiny and Helicoverpa bollworms, Leaf eating caterpillars and Jassids	<b>KARATE / ha</b>	<b>133 ml/ha</b>	<b>200 ml/ha</b>	Add KARATE to a small quantity of water and stir well, then add the mixture to the prescribed quantity of water for use and stir well again. Do not mix with highly alkaline materials, eg. Hydrated lime and lime sulphur.	
		Tailboom spray volume	100 L/ha	150 L/ha		
		Tractor mounted mistblower spray volume	65 L/ha	100 L/ha		
		<b>GROUND ULV</b>				
		Plant Height	40 – 90 cm	Over 90 cm	To make 1 litre spray mix: Add 40 ml KARATE to 350 ml molasses and make up to 1 litre with clean water (i.e. 610 ml); stir well, and use immediately.	
		Ground ULV application spray volume	3,3 L/ha	5,0 L/ha		
		Swath width	3 rows	2 rows		
		Walking speed in metres / minute	60	60		

CROP	PEST	RATE/100 LT WATER	RATE/HA	APPLICATION DIRECTIONS
Tobacco Lands TRB Approval Cert. No.: 17-20-D-33	Cutworms <b>a) At planting:</b>	25 ml	112,5 ml	DRENCH IMMEDIATELY AFTER PLANTING Apply 30 ml cup/plant to wet stem and surrounding soil.
		35 ml	175 ml	SPRAY IMMEDIATELY AFTER PLANTING Apply at 500 litres / ha in 30 cm swath over plants.
			175 ml	SPRAY IMMEDIATELY AFTER PLANTING WITH HERBICIDE - add to herbicide mixture.
	<b>b) Post Planting:</b> Stem Damage  Leaf damage	25 ml	112,5 – 250 ml	DRENCH APPLICATION – apply up to 2x30 ml cups per plant to wet soil surrounding the stem.
		35 ml	149 ml	SPRAY lower leaves and base of stem. Apply mixture at 425 L/ha.
			100 ml	SPRAY AT GERMINATION in a 300 mm swath over crop row. Ground: Apply in 150–300 litres water / ha. Aerial: Apply in 30–40 litres of water.
All crops excluding Cotton	Cutworm		100 ml	SPRAY AT GERMINATION in a 300 mm swath over crop row. Ground: Apply in 150–300 litres water / ha. Aerial: Apply in 30–40 litres of water.
Pastures	African armyworm	50 ml	100 ml	Apply approximately 200 Litres mixture / ha. Spray only infested area.

CROP	PEST	DOSAGE	APPLICATION DETAILS
<b>Leafy vegetables and salad crops:</b> e.g. cabbages, broccoli, cauliflower, kale, spinach, lettuce	<b>Lepidoptera:</b> Diamondback moth (DBM; <i>Plutella xylostella</i> ); Other caterpillars ( <i>Helicoverpa armigera</i> ; <i>Spodoptera littoralis</i> ; loopers)	<b>200 ml/ha (1-4 sprays)</b> in 200-1000 litres of water per ha	<ul style="list-style-type: none"> <li>• Application timing and frequency should be based on economic thresholds.</li> <li>• Apply as required by scouting.</li> <li>• Add wetting agent to waxy Brassica crops.</li> </ul>
<b>Potatoes and Fruiting Vegetables:</b> e.g. tomatoes, peppers, chillies, eggplants cucumbers, squash, courgettes, melons	<b>Lepidoptera:</b> American bollworm ( <i>Helicoverpa armigera</i> ; <i>Heliothis</i> spp.); Other caterpillars (Potato tuber moth; <i>Spodoptera littoralis</i> ; <i>Trichoplusia ni</i> )	<b>200 ml/ha (1-4 sprays)</b> in 200-1000 litres of water per ha	<ul style="list-style-type: none"> <li>• Application timing and frequency should be based on scouting.</li> <li>• To control boring species, time applications before they bore into the fruits or stems.</li> </ul>
<b>Legumes:</b> e.g. peas (mange-tout, sugar-snap, shelling); green beans, soyabeans	<b>Lepidoptera:</b> <i>Helicoverpa armigera</i> , <i>Spodoptera littoralis</i> , <i>Trichoplusia ni</i> .	<b>200 ml/ha (1-4 sprays)</b> in 200-1000 litres of water per ha	As for fruiting vegetables

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CROP	PEST	DOSAGE	APPLICATION DETAILS
<b>Cucurbits:</b> e.g. courgettes, cucumbers, squashes, pumpkin, water melon, melons	<b>Lepidoptera:</b> <i>Helicoverpa armigera</i> , <i>Spodoptera littoralis</i> , <i>Trichoplusia ni</i> .	<b>200 ml/ha (1-4 sprays)</b> in 200-1000 litres of water per ha	As for fruiting vegetables
<b>Maize:</b>	<b>Lepidoptera:</b> Maize stalk borers ( <i>Chilo</i> spp; <i>Busseola</i> spp; & <i>Sesamia</i> spp).	<b>200 ml/ha (1-4 sprays)</b> in 200-400 litres of water per ha aiming to cover the funnel, tassel or silks depending on where the pest is feeding.	Scout for pests once a week for 7 weeks after crop emergence. Apply at the first sign of pest presence; apply a maximum of 2 sprays. To avoid resistance build-up refer to notes under INSECTICIDE RESISTANCE MANAGEMENT.

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CROP	PEST	DOSAGE	APPLICATION DETAILS
<b>Berries:</b> e.g. blueberries, raspberries, strawberries	<b>Lepidoptera:</b> <i>Helicoverpa armigera</i> , <i>Spodoptera littoralis</i> , <i>Trichoplusia ni</i> .	<b>200 ml/ha            (1-4 sprays)</b> in 200-1000 litres of water per ha	As for fruiting vegetables

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