

KARATE ZEON

Version 7

Revision Date 11.06.2008

Print Date 11.06.2008

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

PRODUCT INFORMATION

Product name : KARATE ZEON
Design Code : A12690B
Use : Insecticide
Company : Syngenta Crop Protection AG
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 Switzerland
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Harmful



Dangerous for the environment

2. HAZARDS IDENTIFICATION

Harmful by inhalation and if swallowed.
 May cause sensitization by skin contact.
 May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.
 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical Name	CAS-No.	EC-No.	Symbol(s)	R-phrases(s)	Concentration
lambda-cyhalothrin	91465-08-6	415-130-7	T+, N	R21 R25 R26 R50/53	9.6 % W/W
1,2-propanediol	57-55-6	200-338-0			20 - 30 % W/W
solvent naphtha (petroleum), highly arom.	64742-94-5	265-198-5	Xn, N	R51/53 R65 R66	5 - 10 % W/W
1,2-benzisothiazol-3(2H)-one	2634-33-5	220-120-9	N, Xn	R22 R38 R41 R43 R50	0.05 - 0.1 % W/W

* indicates substances for which there are Community workplace exposure limits.
 For the full text of the R-phrases mentioned in this Section, see Section 16.

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4. FIRST AID MEASURES

- General advice** : Have the product container, label or Material Safety Data Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.
- Inhalation** : Remove to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest.
Call a physician or Poison Control Centre immediately.
- Skin contact** : Take off contaminated clothing and shoes immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use.
- Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical attention is required.
- Ingestion** : If swallowed, seek medical advice immediately and show this container or label.
Do NOT induce vomiting.
- Medical advice** : Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours. Treat symptomatically.
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media** : Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam
or
Water spray
- Extinguishing media which shall not be used for safety reasons** : Do not use a solid water stream as it may scatter and spread fire.
- Specific hazards during fire fighting** : As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health.
- Special protective equipment for fire-** : Wear full protective clothing and self-contained breathing apparatus.

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fighters

Further information : Do not allow run-off from fire fighting to enter drains or water courses.
Cool closed containers exposed to fire with water spray.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Refer to protective measures listed in sections 7 and 8.

Environmental precautions : Prevent further leakage or spillage if safe to do so.
Do not flush into surface water or sanitary sewer system.

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Additional advice : If the product contaminates rivers and lakes or drains inform respective authorities.

7. HANDLING AND STORAGE**HANDLING**

Advice on safe handling : No special protective measures against fire required.
Avoid contact with skin and eyes.
When using, do not eat, drink or smoke.
For personal protection see section 8.

STORAGE

Requirements for storage areas and containers : No special storage conditions required.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep out of the reach of children.
Keep away from food, drink and animal feedingstuffs.

Other data : Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	Exposure limit(s)	Type of exposure limit	Source
lambda-cyhalothrin	0.04 mg/m ³ Skin	8 h TWA	SYNGENTA
1,2-propanediol	10 mg/m ³ Particulates 150 ppm Total (vapour & 470 mg/m ³ particulates)	8 h TWA	UK HSE
solvent naphtha (petroleum), highly arom.	15 ppm 100 mg/m ³	8 h TWA	SUPPLIER

ENGINEERING MEASURES

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

If airborne mists or vapors are generated, use local exhaust ventilation controls.

Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.

Where necessary, seek additional occupational hygiene advice.

PERSONAL PROTECTIVE EQUIPMENT

Protective measures : The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

Respiratory protection : A combination gas, vapor and particulate respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

Hand protection : Chemical resistant gloves should be used. Gloves should be certified to an appropriate standard. Gloves should have a minimum breakthrough time that is appropriate to the duration of exposure. The breakthrough time of gloves varies according to the thickness, material and manufacturer. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough. Suitable material
Nitrile rubber

Eye protection : Eye protection is not usually required. Follow any site specific eye protection policies.

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Skin and body protection : Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation / penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc.) Wear as appropriate: impervious protective suit

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : suspension
Colour : beige to cream
Odour : aromatic, weak
pH : 4 - 8 at 1 % w/v (25 °C)
Boiling point/boiling range : 100 °C
Flash point : > 93 °C
Oxidizing properties : not oxidizing
Explosive properties : Not explosive
Density : 1.057 g/cm³ at 20 °C
Solubility in other solvents : Miscible
in Water
Viscosity, kinematic : 107 cSt at 20 °C

10. STABILITY AND REACTIVITY

Hazardous decomposition products : Combustion or thermal decomposition will evolve toxic and irritant vapors.
Hazardous reactions : None known.
Hazardous polymerization does not occur.
Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : Median lethal dose male Rat, 334 mg/kg
: Median lethal dose female Rat, 404 mg/kg
Acute inhalation toxicity : LC50 Rat, > 2.5 mg/l, 4 h
The toxicological data has been taken from products of similar composition.

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- Acute dermal toxicity** : Median lethal dose Rat, > 2,000 mg/kg
- Skin irritation** : Rabbit: Non-Irritating
May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.
- Eye irritation** : Rabbit: Mildly Irritating
- Sensitisation** : guinea pig: Likely to cause skin sensitization.
Derived from components.
- Long term toxicity**
- Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

12. ECOLOGICAL INFORMATION**ELIMINATION INFORMATION (PERSISTENCE AND DEGRADABILITY)**

- Bioaccumulation** : Lambda-cyhalothrin bioaccumulates.
- Stability in water** : Degradation half life: 56 d
Lambda-cyhalothrin is not persistent in water.
- Stability in soil** : Degradation half life : ca. 7 d
Lambda-cyhalothrin is not persistent in soil.
- Mobility** : Lambda-cyhalothrin is immobile in soil.
- ECOTOXICITY EFFECTS**
- Toxicity to fish** : LC50 Cyprinus carpio (Carp), 12 µg/l , 96 h
- Toxicity to daphnia and other aquatic invertebrates.** : EC50 Daphnia magna (Water flea), 2.6 µg/l , 48 h
- Toxicity to algae**
- lambda-cyhalothrin : EC50 Pseudokirchneriella subcapitata (green algae), > 1 mg/l

13. DISPOSAL CONSIDERATIONS

- Product** : Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.
If recycling is not practicable, dispose of in compliance with local regulations.
- Contaminated packaging** : Empty remaining contents.
Triple rinse containers.

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Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

14. TRANSPORT INFORMATION**Land transport***ADR/ RID:*

UN-Number: 3082
Class: 9
Labels: 9
Packaging group III
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(LAMBDA-CYHALOTHRIN AND SUBSTITUTED BENZENOID HYDROCARBONS)

Sea transport*IMDG:*

UN-Number: 3082
Class: 9
Labels: 9
Packaging group: III
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(LAMBDA-CYHALOTHRIN AND SUBSTITUTED BENZENOID HYDROCARBONS)

Marine pollutant : Marine pollutant

Air transport*IATA-DGR*

Regulation: Not dangerous goods

15. REGULATORY INFORMATION**Labelling according to EC Directives**

Hazardous components which must be listed on the label:

- lambda-cyhalothrin
- 1,2-benzisothiazol-3(2H)-one

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Symbol(s)	: Xn N	Harmful Dangerous for the environment
R-phrases(s)	: R20/22 R43 R50/53	Harmful by inhalation and if swallowed. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases(s)	: S 2 S13 S20/21 S24 S35 S36/37 S57	Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs. When using do not eat, drink or smoke. Avoid contact with skin. This material and its container must be disposed of in a safe way. Wear suitable protective clothing and gloves. Use appropriate container to avoid environmental contamination.
Special labelling of certain preparations	: To avoid risks to man and the environment, comply with the instructions for use.	
Note	: The preparation is classified as dangerous in accordance with Directive 1999/45/EC.	

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16. OTHER INFORMATION**Further information**

Text of R-phrases mentioned in Section 3:

R21	Harmful in contact with skin.
R22	Harmful if swallowed.
R25	Toxic if swallowed.
R26	Very toxic by inhalation.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R50	Very toxic to aquatic organisms.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53	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.

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Changes since the last version are highlighted in the margin. This version replaces all previous versions.

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