

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

IDENTIFICATION OF THE SUBSTANCE OR PREPARATION

Tradename **HALLMARK with ZEON TECHNOLOGY**
 Design Code **A12690B**
 AGI Code **1003094**

COMPANY IDENTIFICATION

Company Syngenta Crop Protection UK Ltd
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2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

CAS-NO.	EC-NO.	CHEMICAL NAME	CONCENTRATION (%W/W)	HAZARD SYMBOLS	RISK PHRASES (R)
91465-08-6	415-130-7	lambda-cyhalothrin	9.6	T+, N	21, 25, 26, 50/53
57-55-6	200-338-0	propane-1,2-diol (Propylene glycol)	20-30	-	-
64742-94-5	265-198-5	solvent naphtha (petroleum), heavy aromatics	5-10	Xn, N	51/53, 65, 66
2634-33-5	220-120-9	1,2-benzisothiazol-3(2H)-one	0.05-0.1	Xn, N	22, 38, 41, 43, 50

For the full text of the R phrases mentioned in this section, see section 16.

3. HAZARDS IDENTIFICATION

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

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 Centre 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.

I N S E C T I C I D E

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 must 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 fighters: In the event of fire, wear self-contained breathing apparatus.

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 and collect spillage 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 technical protective measures required. No special handling advice 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 feed.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

Components	Exposure limit(s)	Value type	Source
lambda-cyhalothrin	0.04 mg/m ³	8 h TWA	SYNGENTA
propane-1,2-diol	10 mg/m ³ particulates 150 ppm Total (vapour & particulates) 470 mg/m ³	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 vapours 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

In all other cases, use the following 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, vapour 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 changed when breakthrough is suspected. Suitable material: nitrile rubber

Eye protection: Eye protection is not usually required. Follow any site specific eye protection policies. Eye/face protection should be certified to EN 166.

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.

INSECTICIDE

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Suspension.
Colour:	Beige to cream.
Odour:	Aromatic, weak.
pH:	5 at 20°C
Boiling Point/range:	100°C.
Flash Point:	> 93°C
Oxidising Properties:	Not oxidising.
Explosive Properties:	Not explosive.
Density:	1.057 g/cm ³ at 20°C
Solubility in Other Solvents:	Miscible in/with water.
Partition Coeff.:	Not available.
Kinematic Viscosity:	107 cSt at 20°C

10. STABILITY AND REACTIVITY

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapours.

Hazardous reactions: None known. Hazardous polymerisation does not occur. Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY (LETHAL DOSES)

Oral LD₅₀ male rats: 334 mg/kg.

Oral LD₅₀ female rats: 404 mg/kg.

Dermal LD₅₀ rat: >2000 mg/kg.

Inhalation: LC₅₀ rat: >2.5 mg/l 4 hours. Based on test results obtained with similar products.

ACUTE TOXICITY (IRRITATION, SENSITISATION, ETC.)

Eye Irritation, rabbit: Mild

Skin Irritation, rabbit: Non-irritant. May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

Sensitisation: guinea pig: Likely to cause skin sensitisation. Remarks: 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: Lambda-cyhalothrin is not persistent in water.

Stability in soil: Lambda-cyhalothrin is moderately persistent in soil.

Mobility: Lambda-cyhalothrin is immobile in soil and will not leach.

ECOTOXICITY

Toxicity to Fish: LC₅₀ 96 hours mirror carp, 12 µg/l

Toxicity to Aquatic Invertebrates: EC₅₀ 48 hours *Daphnia magna* (water flea), 2.6 µg/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. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION**LAND/SEA TRANSPORT ADR/RID/IMDG**

UN Number: UN3082

Class-primary: 9

UN Packaging Group: III

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., (LAMBDA-CYHALOTHRIN AND SUBSTITUTED BENZENOID HYDROCARBONS)

Marine pollutant: Yes

AIR TRANSPORT IATA

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

Hazard symbols/ Classifications	Xn N	HARMFUL DANGEROUS FOR THE ENVIRONMENT
Risk phrases (R)	20/22	Harmful by inhalation and if swallowed.
	43	May cause sensitisation by skin contact.
	50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety phrases (S)	2	Keep out of the reach of children.
	13	Keep away from food, drink and animal feeding stuffs.
	20/21	When using do not eat, drink or smoke.
	24	Avoid contact with skin.
	35	This material and its container must be disposed of in a safe way.
	36/37	Wear suitable protective clothing and gloves.

I N S E C T I C I D E

- 46 If swallowed, seek medical advice immediately and show this or label.
- 57 Use appropriate containment to avoid environmental contamination.

Special labels 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.

16. OTHER INFORMATION

Always read the label. Use pesticides safely.

Product approval number: MAPP 12629.

Based upon SDS version 7 release date 16/09/2005. DPD compliant. Major reformatting and new and/or revised information throughout. (a) Fax number change.

Text of R phrases mentioned in Section 2:

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.

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.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.