

## DEMAND CS

Version 12

Revision Date 11.06.2008

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

#### PRODUCT INFORMATION

**Product name** : DEMAND CS  
**Design Code** : A12690A  
**Use** : Insecticide  
**Company** : Syngenta Crop Protection AG  
 Postfach  
 CH-4002 Basel  
 Switzerland  
**Telephone** : +41 61 323 11 11  
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Harmful



Dangerous for the environment

### 2. HAZARDS IDENTIFICATION

Harmful by inhalation.

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	9.7 % W/W
solvent naphtha (petroleum), light arom.	64742-95-6	265-199-0	Xn, N	R10 R37 R51/53 R65 R66 R67	5 - 10 % W/W
1,2-propanediol	57-55-6	200-338-0			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 - 1 % W/W

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\* 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.

**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.

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- Special protective equipment for fire-fighters** : Wear full protective clothing and 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.

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**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.

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**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 <sup>3</sup> Skin	8 h TWA	SYNGENTA
solvent naphtha (petroleum), light arom.	100 mg/m <sup>3</sup>	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.

**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.

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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**

<b>Form</b>	: liquid
<b>Colour</b>	: white to light brown
<b>pH</b>	: 4 - 8 at 1 % w/v
<b>Flash point</b>	: > 97 °C at 100.9 kPa
<b>Oxidizing properties</b>	: not oxidizing
<b>Explosive properties</b>	: Not explosive
<b>Density</b>	: 1.047 g/cm <sup>3</sup> at 20 °C
<b>Solubility in other solvents</b>	: Miscible in Water
<b>Viscosity, dynamic</b>	: 79.5 - 448 mPa.s at 20 °C : 58.1 - 334 mPa.s at 40 °C

**10. STABILITY AND REACTIVITY**

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

**11. TOXICOLOGICAL INFORMATION**

<b>Acute oral toxicity</b>	: LD50 Rat, > 5,000 mg/kg
<b>Acute inhalation toxicity</b>	: LC50 Rat, > 4.62 mg/l, 4 h
<b>Acute dermal toxicity</b>	: LD50 Rat, > 4,000 mg/kg
<b>Skin irritation</b>	: Rabbit: Slightly Irritating May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.
<b>Eye irritation</b>	: Rabbit: Mild eye irritation
<b>Sensitisation</b>	: : Likely to cause skin sensitization. Derived from components.

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**Long term toxicity**

Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

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**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 *Oncorhynchus mykiss* (rainbow trout), 4 µg/l Derived from components.

**Toxicity to daphnia and other aquatic invertebrates.** : EC50 *Daphnia magna* (Water flea), 4 µg/l , 48 h  
Derived from components.

**Toxicity to algae** : ErC50 *Pseudokirchneriella subcapitata* (green algae), > 10 mg/l , 96 h  
Derived from components.  
: EbC50 *Pseudokirchneriella subcapitata* (green algae), > 10 mg/l , 96 h  
Derived from components.

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**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 to an approved waste handling site for recycling or disposal.  
Do not re-use empty containers.

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**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*

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 )

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### 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

<b>Symbol(s)</b>	: Xn N	Harmful Dangerous for the environment
<b>R-phrases(s)</b>	: R20 R43 R50/53	Harmful by inhalation. May cause sensitisation by skin contact. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>S-phrases(s)</b>	: S 2 S13  S20/21 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. 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.
<b>Special labelling of certain preparations</b>	: To avoid risks to man and the environment, comply with the instructions for use.	
<b>Note</b>	: 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:

<b>R10</b>	Flammable.
<b>R21</b>	Harmful in contact with skin.
<b>R22</b>	Harmful if swallowed.
<b>R25</b>	Toxic if swallowed.
<b>R26</b>	Very toxic by inhalation.
<b>R37</b>	Irritating to respiratory system.
<b>R38</b>	Irritating to skin.
<b>R41</b>	Risk of serious damage to eyes.
<b>R43</b>	May cause sensitisation by skin contact.
<b>R50</b>	Very toxic to aquatic organisms.
<b>R50/53</b>	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>R51/53</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>R65</b>	Harmful: may cause lung damage if swallowed.
<b>R66</b>	Repeated exposure may cause skin dryness or cracking.
<b>R67</b>	Vapours may cause drowsiness and dizziness.

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