

**DEMAND 100CS INSECTICIDE**

Version 2.0      Revision Date: 22.04.2021      SDS Number: S00038860987      This version replaces all previous versions.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : DEMAND 100CS INSECTICIDE

Design code : A12690P

**Manufacturer or supplier's details**

Company : Syngenta Australia Pty Ltd (ABN 33 002 933 717)  
www.syngenta.com.au

Address : 2-4 Lyonpark Road  
Macquarie Park NSW 2113  
Australia

Telephone : (02) 8014 5200

Telefax : (02) 8876 8446

Emergency telephone number : 13 11 26 (Poison Information Centre)  
1800 033 111 (Syngenta)

**Recommended use of the chemical and restrictions on use**

Recommended use : Insecticide

**SECTION 2. HAZARDS IDENTIFICATION****GHS Classification**

Not a hazardous substance or mixture.

**GHS label elements**

Not a hazardous substance or mixture.

**Other hazards which do not result in classification**

May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
lambda-cyhalothrin (ISO)	91465-08-6	< 10
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	64742-95-6	< 10
propane-1,2-diol	57-55-6	< 10
phosphoric acid	7664-38-2	>= 1 -< 3

**SECTION 4. FIRST AID MEASURES**

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General advice	:	Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment.
If inhaled	:	Move the victim 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.
In case of skin contact	:	Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.
In case of 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.
If swallowed	:	If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.
Most important symptoms and effects, both acute and delayed	:	Aspiration may cause pulmonary oedema and pneumonitis. Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours.
Notes to physician	:	Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. Treat symptomatically.

### SECTION 5. FIREFIGHTING 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
Unsuitable extinguishing media	:	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.
Specific extinguishing methods	:	Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.
Special protective equipment for firefighters	:	Wear full protective clothing and self-contained breathing apparatus.
Hazchem Code	:	•3Z

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency	:	Refer to protective measures listed in sections 7 and 8.
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gency procedures

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Do not flush into surface water or sanitary sewer system.  
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and 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).  
Clean contaminated surface thoroughly.  
Clean with detergents. Avoid solvents.  
Retain and dispose of contaminated wash water.

### SECTION 7. HANDLING AND STORAGE

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.

Conditions for safe storage : 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.

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
lambda-cyhalothrin (ISO)	91465-08-6	TWA	0.04 mg/m <sup>3</sup> (Skin)	Syngenta
Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified	64742-95-6	TWA	19 ppm 100 mg/m <sup>3</sup>	Supplier
propane-1,2-diol	57-55-6	TWA (particulate)	10 mg/m <sup>3</sup>	AU OEL
		TWA (Total (vapour and particles))	150 ppm 474 mg/m <sup>3</sup>	AU OEL
phosphoric acid	7664-38-2	TWA	1 mg/m <sup>3</sup>	AU OEL
		STEL	3 mg/m <sup>3</sup>	AU OEL
		TWA	1 mg/m <sup>3</sup>	ACGIH
		STEL	3 mg/m <sup>3</sup>	ACGIH

Engineering measures : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

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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.

Maintain air concentrations below occupational exposure standards.

Where necessary, seek additional occupational hygiene advice.

### Personal protective equipment

- Respiratory protection : No personal respiratory protective equipment normally required.  
When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
- Hand protection
- Material : Nitrile rubber  
Break through time : > 480 min  
Glove thickness : 0.5 mm
- Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.
- Eye protection : No special protective equipment required.
- Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.  
Remove and wash contaminated clothing before re-use.  
Wear as appropriate:  
Impervious clothing
- 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 comply with relevant national standards

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid, opaque

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Colour	:	light beige to brown
Odour	:	No data available
Odour Threshold	:	No data available
pH	:	4 - 8 Concentration: 1 % w/v
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Method: Pensky-Martens closed cup does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Density	:	1.04 g/cm <sup>3</sup> (25 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	625 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	41 - 208 mPa.s ( 40 °C) 55 - 268 mPa.s ( 20 °C)
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Surface tension	:	50.8 mN/m, 20 °C

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Particle size : No data available

### SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.  
 Chemical stability : Stable under normal conditions.  
 Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.  
 Conditions to avoid : No decomposition if used as directed.  
 Incompatible materials : None known.  
 Hazardous decomposition products : No hazardous decomposition products are known.

### SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes : Ingestion  
 Inhalation  
 Skin contact  
 Eye contact

#### Acute toxicity

##### Product:

Acute oral toxicity : LD50 (Rat, male and female): > 2,000 mg/kg  
 Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 0.655 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist  
 Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat, male and female): > 4,000 mg/kg  
 Assessment: The substance or mixture has no acute dermal toxicity

##### Components:

##### **lambda-cyhalothrin (ISO):**

Acute oral toxicity : LD50 (Rat, female): 56 mg/kg  
 LD50 (Rat, male): 79 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): 0.06 mg/l  
 Exposure time: 4 h  
 Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat, female): 696 mg/kg  
 LD50 (Rat, male): 632 mg/kg

##### **Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

Acute oral toxicity : LD50 (Rat): 3,952 mg/kg

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**phosphoric acid:**

Acute oral toxicity : LD50 (Rat): 301 mg/kg  
Acute dermal toxicity : LD50 (Rabbit): 2,750 mg/kg

**Skin corrosion/irritation****Product:**

Species : Rabbit  
Result : No skin irritation

**Components:****lambda-cyhalothrin (ISO):**

Species : Rabbit  
Result : No skin irritation  
Remarks : May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.

**phosphoric acid:**

Result : Corrosive after 3 minutes to 1 hour of exposure

**Serious eye damage/eye irritation****Product:**

Species : Rabbit  
Result : No eye irritation

**Components:****lambda-cyhalothrin (ISO):**

Species : Rabbit  
Result : No eye irritation

**Respiratory or skin sensitisation****Product:**

Species : Guinea pig  
Result : Did not cause sensitisation on laboratory animals.

**Components:****lambda-cyhalothrin (ISO):**

Test Type : Maximisation Test  
Species : Guinea pig  
Result : Does not cause skin sensitisation.  
  
: Local lymph node assay (LLNA)  
: Mouse  
: Does not cause skin sensitisation.

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**Chronic toxicity****Germ cell mutagenicity****Components:****lambda-cyhalothrin (ISO):**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

**phosphoric acid:**

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

**Carcinogenicity****Components:****lambda-cyhalothrin (ISO):**

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

**Reproductive toxicity****Components:****lambda-cyhalothrin (ISO):**

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

**phosphoric acid:**

Reproductive toxicity - Assessment : No toxicity to reproduction

**STOT - single exposure****Components:****lambda-cyhalothrin (ISO):**

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.  
The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

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### STOT - repeated exposure

#### Components:

#### lambda-cyhalothrin (ISO):

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

### Aspiration toxicity

#### Components:

#### Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:

May be fatal if swallowed and enters airways.

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Product:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0.93 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.08 mg/l  
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 53.72 mg/l  
Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)): 3 mg/l  
End point: Growth rate  
Exposure time: 72 h

EC10 (Raphidocelis subcapitata (freshwater green alga)): 7.43 mg/l  
End point: Growth rate  
Exposure time: 72 h

#### Components:

#### lambda-cyhalothrin (ISO):

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 0.000078 mg/l  
Exposure time: 96 h

LC50 (Ictalurus punctatus (channel catfish)): 0.00016 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.00036 mg/l  
Exposure time: 48 h

LC50 (Americamysis): 0.000007 mg/l

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	Exposure time: 48 h
	EC50 (Hyalella azteca (Amphipod)): 0.000002 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	: ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 0.31 mg/l Exposure time: 96 h
M-Factor (Acute aquatic toxicity)	: 100,000
Toxicity to fish (Chronic toxicity)	: NOEC (Pimephales promelas (fathead minnow)): 0.000031 mg/l Exposure time: 300 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 0.000002 mg/l Exposure time: 21 d  NOEC (Americamysis): 0.00022 µg/l Exposure time: 28 d
M-Factor (Chronic aquatic toxicity)	: 100,000
Toxicity to microorganisms	: EC50 (activated sludge): > 100 mg/l Exposure time: 3 h

### **Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

Toxicity to fish	: LL50 (Oncorhynchus mykiss (rainbow trout)): 9.2 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	: EL50 (Daphnia magna (Water flea)): 3.2 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	: ErC50 (Raphidocelis subcapitata (freshwater green alga)): 2.6 - 2.9 mg/l Exposure time: 72 h  NOEC (Raphidocelis subcapitata (freshwater green alga)): 1 mg/l End point: Growth rate Exposure time: 72 h
Toxicity to fish (Chronic toxicity)	: NOEC (Oncorhynchus mykiss (rainbow trout)): 1.23 mg/l Exposure time: 28 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	: NOEC (Daphnia magna (Water flea)): 2.14 mg/l Exposure time: 28 d

### **Ecotoxicology Assessment**

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

### **phosphoric acid:**

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 3 - 3.25 mg/l

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Exposure time: 96 h

**Ecotoxicology Assessment**

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

**Persistence and degradability****Components:****lambda-cyhalothrin (ISO):**

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life (DT50): 7 d  
Remarks: Product is not persistent.

**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

Biodegradability : Result: Readily biodegradable.

**Bioaccumulative potential****Components:****lambda-cyhalothrin (ISO):**

Bioaccumulation : Remarks: Bioaccumulates

**Mobility in soil****Components:****lambda-cyhalothrin (ISO):**

Distribution among environmental compartments : Remarks: immobile

Stability in soil : Dissipation time: 56 d  
Percentage dissipation: 50 % (DT50)  
Remarks: Product is not persistent.

**Other adverse effects****Components:****lambda-cyhalothrin (ISO):**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Solvent naphtha (petroleum), light arom.; Low boiling point naphtha -unspecified:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

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### phosphoric acid:

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : 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 : Non-returnable containers:  
Triple rinse containers.  
Add rinsings to spray tank  
If recycling, replace cap and return clean containers to recycler or designated collection point. Containers marked with the drumMUSTER container logo can be taken to a drumMUSTER collection site (02 6206 6868, [www.drummuster.org.au](http://www.drummuster.org.au)). Empty containers can be landfilled, when in accordance with the local regulations.  
If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.  
Returnable containers:  
Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(LAMBDA-CYHALOTHRIN AND SOLVENT NAPHTHA)  
Class : 9  
Packing group : III  
Labels : 9

#### IATA-DGR

UN/ID No. : UN 3082  
Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.  
(LAMBDA-CYHALOTHRIN AND SOLVENT NAPHTHA)  
Class : 9  
Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964

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Packing instruction (passenger aircraft) : 964  
 Environmentally hazardous : yes

### IMDG-Code

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LAMBDA-CYHALOTHRIN AND SOLVENT NAPHTHA)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 EmS Code : F-A, S-F  
 Marine pollutant : yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

#### ADG

UN number : UN 3082  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (LAMBDA-CYHALOTHRIN AND SOLVENT NAPHTHA)  
 Class : 9  
 Packing group : III  
 Labels : 9  
 Hazchem Code : •3Z  
 Remarks : Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the Australian Code for the Transport of Dangerous Goods (ADG). This applies when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs per ADG Special Provision AU01.

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Standard for the Uniform Scheduling of Medicines and Poisons : Schedule 5

Prohibition/Licensing Requirements : There is no applicable prohibition, authorisation and restricted use requirements, including for carcinogens referred to in Schedule 10 of the model WHS Act and Regulations.



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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.

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