

**DEMAND G**

Version 1.0      Revision Date: 19.12.2022      SDS Number: S1185452096      This version replaces all previous versions.

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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : DEMAND G

Design code : A14556B

**Manufacturer or supplier's details**

Company : Syngenta Asia Pacific Pte. Ltd

Address : No. 1 HarbourFront Avenue, #03-03 Keppel Bay Tower  
Singapore 098632

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Emergency telephone number : +60 376 283 812

Telefax : +65 6338 1256

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

Recommended use : Insecticide

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

Reproductive toxicity : Category 1B

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 1

**GHS label elements**

Hazard pictograms : 

Signal word : Danger

Hazard statements : H360 May damage fertility or the unborn child.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.

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P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P391 Collect spillage.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

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

May cause temporary itching, tingling, burning or numbness of exposed skin, called paresthesia.  
May form combustible dust concentrations in air.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
propylene carbonate	108-32-7	>= 1 -< 10
tetrahydro-2-furyl-methanol	97-99-4	>= 0.3 -< 1
lambda-cyhalothrin (ISO)	91465-08-6	>= 0.025 -< 0.1

### 4. FIRST AID MEASURES

- 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 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.
- 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.

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Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed : Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours.

Notes to physician : There is no specific antidote available. Treat symptomatically.

### 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.

### 6. ACCIDENTAL RELEASE MEASURES

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

Environmental precautions : 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, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).  
Do not create a powder cloud by using a brush or compressed air.  
Clean contaminated surface thoroughly.  
Clean with detergents. Avoid solvents.  
Retain and dispose of contaminated wash water.

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### 7. HANDLING AND STORAGE

- Advice on safe handling : This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.
- Avoid contact with skin and eyes.  
When using do not eat, drink or smoke.  
For personal protection see section 8.
- Conditions for safe storage : 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.

### 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

- 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.
- 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

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- 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:  
Dust impervious protective suit
- 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.
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**9. PHYSICAL AND CHEMICAL PROPERTIES**

- Appearance : granules
- Colour : brown
- Odour : Paint
- Odour Threshold : No data available
- pH : 7.3 (25 °C)  
Concentration: 1 % w/v
- Melting point/range : No data available
- Boiling point/boiling range : No data available
- Flash point : No data available
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Evaporation rate	:	No data available
Flammability (solid, gas)	:	May form combustible dust concentrations in air.
Burning number	:	2 (100 °C) 2 (20 °C)
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	:	ca. 0.76 g/cm <sup>3</sup> (20 °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	:	No data available
Decomposition temperature	:	No data available
Minimum ignition temperature	:	600 °C
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Minimum ignition energy	:	> 1 J
Particle size	:	No data available

### 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.

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Incompatible materials : None known.

Hazardous decomposition products : No hazardous decomposition products are known.

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**11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : Ingestion  
Inhalation  
Skin contact  
Eye contact

**Acute toxicity****Product:**

Acute oral toxicity : LD50 (Rat, female): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rat, male and female): > 5,050 mg/kg

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

Acute oral toxicity : LD50 (Rat, female): 56 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, male): 632 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.

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

Species : Rabbit

Result : No eye irritation

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**Components:****propylene carbonate:**

Species : Rabbit  
Result : irritating

**tetrahydro-2-furyl-methanol:**

Result : Eye irritation

**lambda-cyhalothrin (ISO):**

Species : Rabbit  
Result : No eye irritation

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

Test Type : Buehler Test  
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.

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

**Germ cell mutagenicity****Components:****propylene carbonate:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects., Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

**lambda-cyhalothrin (ISO):**

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

**Carcinogenicity****Components:****propylene carbonate:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.



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### lambda-cyhalothrin (ISO):

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

### Reproductive toxicity

#### Components:

#### propylene carbonate:

Reproductive toxicity - Assessment : No toxicity to reproduction  
No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

#### tetrahydro-2-furyl-methanol:

Reproductive toxicity - Assessment : Clear evidence of adverse effects on development, based on animal experiments., Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

### lambda-cyhalothrin (ISO):

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

### STOT - single exposure

#### Components:

#### lambda-cyhalothrin (ISO):

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

### STOT - repeated exposure

#### Components:

#### lambda-cyhalothrin (ISO):

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

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### 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

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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  
Exposure time: 48 h

EC50 (Hyaella 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

### Persistence and degradability

#### Components:

##### **propylene carbonate:**

Biodegradability : Result: Readily biodegradable.

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

Biodegradability : Result: Not readily biodegradable.

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

### Bioaccumulative potential

#### Components:

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

Bioaccumulation : Remarks: Bioaccumulates

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### 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:

##### **propylene carbonate:**

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).

##### **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).

## 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 : 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.

## 14. TRANSPORT INFORMATION

### International Regulations

#### **UNRTDG**

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (LAMBDA-CYHALOTHRIN)

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Class : 9  
 Packing group : III  
 Labels : 9

### IATA-DGR

UN/ID No. : UN 3077  
 Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
 (LAMBDA-CYHALOTHRIN)

Class : 9  
 Packing group : III  
 Labels : Miscellaneous  
 Packing instruction (cargo aircraft) : 956  
 Packing instruction (passenger aircraft) : 956  
 Environmentally hazardous : yes

### IMDG-Code

UN number : UN 3077  
 Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
 N.O.S.  
 (LAMBDA-CYHALOTHRIN)

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.

### 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.

## 15. REGULATORY INFORMATION

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

#### Workplace Safety and Health Act and Workplace Safety and Health (General Provisions) Regulations: This product is subjected to the SDS, labelling, PEL and other requirements in the Act/Regulations.

Environmental Protection and Management Act and : Not applicable  
 Environmental Protection and Management (Hazardous Substances) Regulations

Fire Safety (Petroleum and Flammable Materials) : Not applicable  
 Regulations

## 16. OTHER INFORMATION

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Revision Date : 19.12.2022

Date format : dd.mm.yyyy

**Full text of other abbreviations**

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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.

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