

## SAFETY DATA SHEET

### Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name:</b>	<b>DEMAND<sup>®</sup> Insecticide</b>
<b>Other Names:</b>	<b>Proper shipping name:</b> Environmentally Hazardous Substance, Liquid, N.O.S. (Lambda-cyhalothrin and Substituted Benzenoid Hydrocarbons) <b>Applicable only for marine transport</b>
	<b>Product code:</b> A12689A / A12689G
<b>Recommended Use:</b>	Insecticide for the control of Cockroaches, Spiders, Fleas, Ants, Flies, Silverfish and Mosquitoes in Domestic, Public Service, Commercial and Industrial situations.
<b>Company Details:</b>	<b>Syngenta Crop Protection Pty Limited</b> ABN 33 002 933 717
<b>Address:</b>	<b>Level 1, 2-4 Lyonpark Road</b> <b>MACQUARIE PARK NSW 2113</b> <b>AUSTRALIA</b>
<b>Telephone Number:</b>	<b>(02) 8876 8444</b>
<b>Emergency Telephone Number:</b>	<b>24 hours - 1800 033 111</b>

### Section 2: HAZARDS IDENTIFICATION

<b>Hazard Classification:</b>	Classified as a hazardous chemical according to the Australian criteria for the classification of chemicals
<b>Risk Phrases:</b>	R23 Toxic by inhalation R43 May cause skin sensitisation by skin contact
<b>Safety Phrases:</b>	-

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

<b>SUBSTANCE</b>	
<b>Chemical Identity of Pure Substance:</b>	Lambda-cyhalothrin
<b>Synonym:</b>	PP321
<b>CAS Number:</b>	91465-08-6

<b>MIXTURE</b>		
<b>Chemical Identity of Ingredients</b>	<b>CAS No</b>	<b>Proportion (%w/v)</b>
Lambda-cyhalothrin	91465-08-6	2.5
solvent naphtha (petroleum), light aromatic	64742-95-6	1 - 5
1,2-propanediol	57-55-6	5 - 10
1,2-benzisothiazol-3(2H)-one	2634-33-5	0.05 - 1
Other ingredients determined not to be hazardous	-	to 100

## Section 4: FIRST AID MEASURES

<b>Description of Necessary First Aid Measures:</b>	<p>In case of poisoning by any exposure route contact a doctor or Poisons Information Centre on 131 126. Have the product label or SDS with you when calling or going for treatment.</p> <p><b>Ingestion:</b> If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.</p> <p><b>Eye contact:</b> Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.</p> <p><b>Skin contact:</b> 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.</p> <p><b>Inhalation:</b> Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a physician or Poison Information Centre immediately.</p>
<b>Poisoning Symptoms:</b>	<p>Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours.</p>
<b>Medical Advice:</b>	<p>Skin contact paresthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours. Treat symptomatically.</p> <p>Do not induce vomiting: contains petroleum distillates and/or aromatic solvents.</p>

## Section 5: FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media:</b>	<p><i>Small fires</i>          Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do not use a solid water stream as it may scatter and spread fire.</p> <p><i>Large fires</i>          Use alcohol-resistant foam or water spray. Do not use a solid water stream as it may scatter and spread fire.</p>
<b>Hazards from Combustion Products:</b>	<p>As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see Section 10). Combustion or thermal decomposition will evolve toxic and irritant vapours. Exposure to decomposition products may be a hazard to health.</p>
<b>Special Protective Precautions and Equipment for Fire Fighters:</b>	<p>Wear protective clothing and self-contained breathing apparatus.</p> <p>Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.</p>

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>Emergency Procedures:</b>	In case of spillage it is important to take all steps necessary to <ul style="list-style-type: none"> <li>• Avoid eye and skin contact</li> <li>• Avoid contamination of waterways</li> </ul>
<b>Methods and Materials for Containment and Clean Up:</b>	<p><b>Procedure for spill</b></p> <ol style="list-style-type: none"> <li>(1) Keep all bystanders away</li> <li>(2) Wear full length clothing and PVC gloves</li> <li>(3) Reposition any leaking containers so as to minimise further leakage</li> <li>(4) Dam and absorb spill with an absorbent material (eg sand or soil)</li> <li>(5) Shovel the absorbed spill into drums</li> <li>(6) Disposal of the absorbed material will depend upon the extent of the spill <ul style="list-style-type: none"> <li>• For quantities up to 50 L of product bury in a secure landfill site</li> <li>• For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established</li> </ul> </li> <li>(7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable.</li> </ol>

## Section 7: HANDLING AND STORAGE

<b>Precautions for Safe Handling:</b>	Will irritate the eyes and skin. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes and skin. When preparing the spray and using the prepared spray wear: <ul style="list-style-type: none"> <li>• cotton overalls buttoned to the neck and wrist</li> <li>• a washable hat</li> <li>• elbow-length PVC gloves</li> </ul> <p>If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms, and face thoroughly with soap and water. After each day's use wash gloves and contaminated clothing.</p>
<b>Conditions for Safe Storage:</b>	Store in the closed original container in a cool, well-ventilated area, out of direct sunlight. DO NOT store for prolonged periods in direct sunlight.

## Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

### ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

	<i>Component</i>	<i>Exposure limit</i>	<i>Value type</i>
<b>National Exposure Standards:</b>	1,2-propanediol (vapour and particulates)	474 mg/L	8h TWA
		150 ppm	8h TWA
<b>Syngenta Exposure Standards:</b>	lambda-cyhalothrin (skin)	0.04 mg/m <sup>3</sup>	8h TWA
<b>Exposure Standards (Supplier)</b>	solvent naphtha (petroleum), light arom.	100 mg/m <sup>3</sup>	8h TWA
<b>Biological Limit Values:</b>	No biological limit allocated		

<b>Engineering Controls:</b>	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
<b>Personal Protective Equipment:</b>	Will irritate the eyes and skin. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes and skin. When preparing the spray and using the prepared spray wear: <ul style="list-style-type: none"> <li>• cotton overalls buttoned to the neck and wrist</li> <li>• a washable hat</li> <li>• elbow-length PVC gloves</li> </ul> If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms, and face thoroughly with soap and water. After each day's use wash gloves and contaminated clothing.

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Off-white suspension	<b>Boiling Point/Range:</b>	Not available
<b>Odour:</b>	Like phenol, weak	<b>Freezing/Melting Point:</b>	Not available
<b>pH:</b>	5.0 – 6.0	<b>Solubility:</b>	Miscible in water
<b>Vapour Pressure:</b>	Not available	<b>Density:</b>	1.031 g/cm <sup>3</sup> at 20°C
<b>Vapour Density:</b>	Not available	<b>Viscosity, kinematic:</b>	1,540 cSt at 20°C

<b>Flash Point:</b>	>98°C at 745 mm Hg	<b>Explosive Properties:</b>	Not Explosive
<b>Upper and Lower Flammable (Explosive) Limits in Air:</b>	Not applicable	<b>Oxidising Properties:</b>	Not oxidising
<b>Ignition Temperature:</b>	620°C	<b>Combustibility:</b>	Combustible
		<b>Corrosiveness:</b>	Not corrosive

## Section 10: STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal conditions.
<b>Conditions to Avoid:</b>	None known.
<b>Incompatible Materials:</b>	None known.
<b>Hazardous Decomposition Products:</b>	Combustion or thermal decomposition will evolve toxic and irritant vapours.
<b>Hazardous Reactions:</b>	None known. Hazardous polymerization does not occur.

## Section 11: TOXICOLOGICAL INFORMATION

<b>Health Effects from Likely Routes of Exposure:</b>		
<b>Acute:</b>	<b>Oral toxicity:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product has a low toxicity following single doses of a similar formulation. (LD <sub>50</sub> , Rat >5,000 mg/kg)
	<b>Dermal toxicity:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product has a low toxicity following single doses of a similar formulation. (LD <sub>50</sub> >4,000 mg/kg)

<b>Inhalation:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product not harmful due to inhalation of a similar formulation. (LC <sub>50</sub> (4 hr) >4.62 mg/L)
<b>Skin irritation:</b>	<b>PRACTICALLY NON IRRITANT</b> May cause temporary itching, tingling, burning or numbness of exposed skin, called paraesthesia.
<b>Eye irritation:</b>	<b>NON IRRITANT</b>
<b>Sensitisation:</b>	<b>SENSITIZER</b> (Derived from active ingredient)
<b>Chronic:</b>	<b>Lambda-cyhalothrin technical</b> has been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, carcinogenic, teratogenic neurotoxic or reproductive effects.

## Section 12: ECOLOGICAL INFORMATION

The following information is based on lambda-cyhalothrin technical material.

<b>Ecotoxicity:</b>	<table border="0"> <tr> <td style="padding-right: 20px;"><i>Toxicity to fish:</i></td> <td><b>Very highly toxic to fish</b> <i>Oncorhynchus mykiss</i> (rainbow trout): LC<sub>50</sub> = 18 µg/L, 96 h</td> </tr> <tr> <td style="padding-right: 20px;"><i>Toxicity to daphnia and other aquatic invertebrates:</i></td> <td><b>Very highly toxic to aquatic invertebrates</b> <i>Daphnia magna</i> (Water flea): EC<sub>50</sub> = 15 µg/L, 48 h</td> </tr> <tr> <td style="padding-right: 20px;"><i>Toxicity to algae:</i></td> <td><b>Moderately toxic to algae</b> <i>Pseudokirchneriella subcapitata</i> (green algae): EC<sub>50</sub> &gt;1 mg/L, 72 h</td> </tr> </table>	<i>Toxicity to fish:</i>	<b>Very highly toxic to fish</b> <i>Oncorhynchus mykiss</i> (rainbow trout): LC <sub>50</sub> = 18 µg/L, 96 h	<i>Toxicity to daphnia and other aquatic invertebrates:</i>	<b>Very highly toxic to aquatic invertebrates</b> <i>Daphnia magna</i> (Water flea): EC <sub>50</sub> = 15 µg/L, 48 h	<i>Toxicity to algae:</i>	<b>Moderately toxic to algae</b> <i>Pseudokirchneriella subcapitata</i> (green algae): EC <sub>50</sub> >1 mg/L, 72 h
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<b>Persistence and Degradability:</b>	Lambda-cyhalothrin is not persistent in soil or water.						
<b>Environmental Fate (Exposure):</b>	Incorporated into organic molecules						
<b>Mobility</b>	Lambda-cyhalothrin is immobile in soil.						
<b>Bioaccumulative Potential:</b>	Lambda-cyhalothrin bioaccumulates.						

## Section 13: DISPOSAL CONSIDERATIONS

<b>Disposal Methods and Containers:</b>	Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. 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.
<b>Special Precautions for Landfill or Incineration:</b>	Not applicable

### Section 14: TRANSPORT INFORMATION

<b>LAND TRANSPORT</b> ADG		Not a dangerous good in Australia	
<b>UN Number:</b>	None allocated	<b>Packing Group:</b>	None allocated
<b>UN Proper Shipping Name:</b>	None allocated	<b>Special Precautions for User:</b>	None allocated
<b>Class:</b>	None allocated	<b>Hazchem Code:</b>	None allocated
<b>Subsidiary Risk:</b>	None allocated		

<b>SEA TRANSPORT</b> IMDG			
<b>UN Number:</b>	3082	<b>Class:</b>	9
<b>UN Proper Shipping Name:</b>	Environmentally Hazardous Substance, Liquid, N.O.S. (Lambda-cyhalothrin and Solvent naptha)	<b>Subsidiary Risk:</b>	None allocated
		<b>Packing Group:</b>	III
		<b>Marine Pollutant:</b>	Marine pollutant

<b>AIR TRANSPORT</b> IATA - DGR			
<b>UN Number:</b>	3082	<b>Subsidiary Risk:</b>	None allocated
<b>UN Proper Shipping Name:</b>	Environmentally Hazardous Substance, Liquid, N.O.S. (Lambda-cyhalothrin and Solvent naptha)	<b>Packing Group:</b>	III
		<b>Class:</b>	9

### Section 15: REGULATORY INFORMATION

<b>APVMA Product Number:</b>	47196
<b>Poisons Schedule (SUSDP):</b>	5

### Section 16: OTHER INFORMATION

<b>Date of preparation or last revision:</b> November 2011
<b>Source of Data:</b> The information provided in this SDS is sourced from Syngenta internal studies which have been conducted according to Regulatory requirements including OECD and CIPAC Guidelines and EC Directives. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.
<b>Note:</b> This product is a registered agricultural chemical and must, therefore, be used in accordance with the container label directions
<b>CONTACT POINT:</b> Regulatory Affairs Manager, Syngenta Crop Protection Pty Limited (02) 8876 8444 <b>24 HOURS EMERGENCY CONTACT: 1800 033 111</b>
This Material Safety Data Sheet summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.