

## SAFETY DATA SHEET

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

<b>Product Name:</b>	<b>CRUISER<sup>®</sup> OPTI Insecticide Seed Treatment</b>
<b>Other Names:</b>	<b>Proper shipping name:</b> Environmentally Hazardous Substance, Liquid, N.O.S. (thiamethoxam, lambda-cyhalothrin) <b>Applicable only for marine and air transport</b>
	<b>Product code:</b> A15663D
<b>Recommended Use:</b>	Insecticide Seed Treatment
<b>Company Details:</b>	<b>Syngenta Australia Pty Ltd</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 Harmful if swallowed
<b>Safety Phrases:</b>	—

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE		
<b>Chemical Identity of Pure Substance:</b>	Thiamethoxam	Lambda-cyhalothrin
<b>Synonym:</b>	CGA293343	PP321
<b>CAS Number:</b>	153719-23-4	91465-08-6

MIXTURE		
Chemical Identity of Ingredients	CAS No	Proportion (% w/w)
thiamethoxam	153719-23-4	21
lambda-cyhalothrin	91465-08-6	3.7
1,2,3-propanetriol	56-81-5	5 - 10
1,2-propanediol	57-55-6	1 - 5
1,2-benzisothiazol-3(2H)-one	2634-33-5	<1
solvent naphtha (petroleum), light arom.	64742-95-6	1 - 5
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 get to a doctor or hospital quickly. Phone 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> Move the victim to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a doctor or Poisons Information Centre immediately.</p>
<b>Poisoning Symptoms:</b>	<p>Poisoning symptoms in laboratory animals were non-specific. Human exposure experience with lambda-cyhalothrin indicates skin contact paraesthesia effects (itching, tingling, burning or numbness) may occur in some individuals. These effects are transient, lasting up to 24 hours.</p>
<b>Medical Advice:</b>	<p>There is no specific antidote available. Skin contact paraesthesia effects (itching, tingling, burning or numbness) are transient, lasting up to 24 hours. Treat symptomatically.</p>

## Section 5: FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media:</b>	<p><i>Extinguishing media - small fires</i> Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</p> <p><i>Extinguishing media - large fires</i> 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). Exposure to decomposition products may be a hazard to health.</p>
<b>Special Protective Precautions and Equipment for Fire Fighters:</b>	<p>Wear full protective clothing and self-contained breathing apparatus. 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>	<p>May irritate the eyes. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes.</p> <p>When preparing the slurry and using the prepared slurry, wear:</p> <ul style="list-style-type: none"> <li>• chemical resistant clothing buttoned to the neck, wrist and ankles</li> <li>• washable hat</li> <li>• elbow length chemical resistant gloves</li> </ul> <p>When undertaking bagging sewing activities, wear:</p> <ul style="list-style-type: none"> <li>• cotton overalls over normal clothing buttoned to the neck and wrist</li> <li>• half facepiece respirator with dust cartridge or canister</li> </ul> <p>When handling treated seed, wear:</p> <ul style="list-style-type: none"> <li>• elbow length chemical resistant gloves</li> <li>• half facepiece respirator with dust cartridge or canister</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 closed original container in a cool, well ventilated area. 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>	1,2,3-propanetriol	10 mg/m <sup>3</sup>	8 h TWA
	1,2-propanediol	10 mg/m <sup>3</sup> Particulates 150 ppm Total (vapour 470 mg/m <sup>3</sup> & particulates)	8 h TWA
<b>Syngenta Exposure Standards:</b>	thiamethoxam	3 mg/m <sup>3</sup>	8 h TWA
	lambda-cyhalothrin	0.04 mg/m <sup>3</sup>	8 h TWA (skin)
<b>Supplier Exposure Standards</b>	solvent naphtha (petroleum), light arom.	100 mg/m <sup>3</sup>	8 h TWA
<b>Biological Limit Values:</b>	No biological limits allocated		
<b>Engineering Controls:</b>	<p>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.</p> <p>If airborne mists or vapours are generated, use local exhaust ventilation controls.</p> <p>Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit.</p> <p>Where necessary, seek additional occupational hygiene advice.</p>		
<b>Personal Protective Equipment:</b>	<p>May irritate the eyes. Facial skin contact may cause temporary facial numbness. Avoid contact with eyes.</p> <p>When preparing the slurry and using the prepared slurry, wear:</p> <ul style="list-style-type: none"> <li>• chemical resistant clothing buttoned to the neck, wrist and ankles</li> <li>• washable hat</li> <li>• elbow length chemical resistant gloves</li> </ul> <p>When undertaking bagging sewing activities, wear:</p> <ul style="list-style-type: none"> <li>• cotton overalls over normal clothing buttoned to the neck and wrist</li> <li>• half facepiece respirator with dust cartridge or canister</li> </ul> <p>When handling treated seed, wear:</p> <ul style="list-style-type: none"> <li>• elbow length chemical resistant gloves</li> <li>• half facepiece respirator with dust cartridge or canister</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.</p> <p>After each day's use, wash gloves, and contaminated clothing.</p>		

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Light red to dark red liquid suspension	<b>Boiling Point/Range:</b>	About 100°C
<b>Odour:</b>	Faint chemical odour	<b>Freezing/Melting Point:</b>	Not known
<b>pH:</b>	4 - 8 at 1 % w/v	<b>Solubility:</b>	Miscible in water
<b>Vapour Pressure:</b>		<b>Density:</b>	1.13 g/cm <sup>3</sup>
Thiamethoxam:	6.6 x 10 <sup>-9</sup> Pa at 25°C		
Lambda-cyhalothrin:	2.0 x 10 <sup>-7</sup> Pa at 20°C 2.0 x 10 <sup>-4</sup> Pa at 60°C		
<b>Vapour Density:</b>	Not available		

<b>Flash Point:</b>	>90°C	<b>Explosive Properties:</b>	Not explosive
<b>Upper and Lower Flammable (Explosive) Limits in Air:</b>	Not available	<b>Oxidising Properties:</b>	Not oxidising
<b>Autoignition Temperature:</b>	470°C	<b>Combustibility:</b>	Not combustible
		<b>Corrosiveness:</b>	Corrosive to sheet steel. Slight corrosion to tin plate, galvanised sheet metal. Not corrosive to stainless steel.

## 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 low toxicity following single doses of undiluted product. (LD <sub>50</sub> = 3045 mg/kg)
	<b>Dermal toxicity:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product has low toxicity following skin contact with undiluted product. (LD <sub>50</sub> >5050 mg/kg)
	<b>Inhalation:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product is not harmful due to inhalation of undiluted product. LC <sub>50</sub> (4h) = >2.53 mg/L air
	<b>Skin irritation:</b>	<b>NON IRRITANT</b>

<b>Eye irritation:</b>	<b>MILD IRRITANT</b>
<b>Sensitisation:</b>	<b>NOT A SENSITISER</b>
<b>Chronic:</b>	<p><b>Thiamethoxam technical</b> has been extensively tested on laboratory mammals and in test-tube systems. The liver and kidney were identified as target organs. No evidence of neurotoxic, mutagenic, teratogenic or reproductive effects was obtained. No carcinogenic potential was noticed in rats. Liver tumours were observed in a carcinogenicity study on mice but occurred at dose levels that interfered with normal liver function and is considered to be related to sustained regenerative cell proliferation related to cell death supported by a phenobarbital-like enzyme induction. Special studies revealed that thiamethoxam tech. acts as an inducer of metabolising liver enzymes in the mouse. This effect had a clear threshold level and was of a type specific to mice and is not considered relevant to humans.</p> <p><b>Lambda-cyhalothrin and cyhalothrin technical</b> have been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, carcinogenic, teratogenic effects.</p> <p>Minor reproductive and developmental effects (reduction in litter size and bodyweight gain) was noted in animal studies. Did not show mutagenic or teratogenic effects in animal experiments. Nervous system effects typical of pyrethroids were observed in animal tests.</p>

## Section 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	<p><i>Toxicity to fish:</i> <b>Highly toxic to fish</b> <i>Oncorhynchus mykiss</i> (rainbow trout): LC<sub>50</sub> = 0.069 mg/L, 96 h</p> <p><i>Toxicity to daphnia and other aquatic invertebrates:</i> <b>Highly toxic to Daphnia</b> <i>Daphnia magna</i> (Water flea): EC<sub>50</sub> = 0.11 mg/L, 48 h</p> <p><i>Toxicity to algae:</i> <b>Moderately toxic to algae</b> <i>Pseudokirchneriella subcapitata</i> (green algae): E<sub>r</sub>C<sub>50</sub> = &gt;100 mg/L, 72 h</p> <p><i>Toxicity to soil dwelling organisms:</i> <b>Practically non-toxic to earthworms</b> <i>Eisenia foetida</i> (earthworm): LC<sub>50</sub> &gt;1000 mg/kg, 14 day</p>
<b>Persistence and Degradability:</b>	<p><i>Thiamethoxam:</i> <b>Water</b> Degradation half life: 11 d Thiamethoxam is not persistent in water.</p> <p><i>Soil</i> Degradation half life : 51 d Thiamethoxam is not persistent in soil.</p> <p><i>Lambda-cyhalothrin:</i> <b>Water</b> Degradation half life: 7 d Lambda-cyhalothrin is not persistent in water.</p> <p><i>Soil</i> Degradation half life : 56 d Lambda-cyhalothrin is not persistent in soil.</p>
<b>Mobility:</b>	<p><i>Thiamethoxam:</i> Thiamethoxam has medium mobility in soil.</p> <p><i>Lambda-cyhalothrin:</i> Lambda-cyhalothrin is immobile in soil.</p>
<b>Environmental Fate (Exposure):</b>	<p><i>Thiamethoxam:</i> Incorporated into C, N, O and H containing organic molecules</p> <p><i>Lambda-cyhalothrin:</i> Incorporated into organic molecules.</p>
<b>Bioaccumulative Potential:</b>	<p><i>Thiamethoxam:</i> Thiamethoxam has low potential for bioaccumulation.</p> <p><i>Lambda-cyhalothrin:</i> Lambda-cyhalothrin bioaccumulates.</p>

## Section 13: DISPOSAL CONSIDERATIONS

<b>Disposal Methods and Containers:</b>	If not recycling, triple rinse, break, crush or puncture and deliver empty packaging for appropriate disposal at an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. Empty containers and product must 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>Subsidiary Risk:</b>	None allocated
<b>UN Proper Shipping Name:</b>	Environmentally Hazardous Substance, Liquid, N.O.S. (thiamethoxam and lambda-cyhalothrin)	<b>Packing Group:</b>	III
<b>Class:</b>	9	<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. (thiamethoxam and lambda-cyhalothrin)	<b>Packing Group:</b>	III
<b>Class:</b>	9		

## Section 15: REGULATORY INFORMATION

APVMA Product Number: 65888

Poisons Schedule (SUSDP): 6

## Section 16: OTHER INFORMATION

Date of preparation or last revision: March 2013

**Source of Data:** 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.

**Note: This product is a registered agricultural chemical and must, therefore, be used in accordance with the container label directions**

**CONTACT POINT:** Regulatory Manager, Syngenta Australia Pty Ltd  
(02) 8876 8444

**24 HOURS EMERGENCY CONTACT: 1800 033 111**

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.

### DISCLAIMER

This product complies with the specifications in its statutory registration. Implied terms and warranties are excluded. Syngenta's liability for breach of the express or any non-excludable implied warranty is limited to product replacement or purchase price refund. The purchaser must determine suitability for intended purpose and take all proper precautions in the handling, storage and use of the product including those on the label and/or safety data sheet failing which Syngenta shall have no liability.