

## SAFETY DATA SHEET

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

<b>Product Name:</b>	<b>ACTARA® INSECTICIDE</b>
<b>Other Names:</b>	<b>Proper shipping name:</b> Environmentally Hazardous Substance, Solid, N.O.S. (thiamethoxam). <b>Applicable only for marine and air transport</b>
	<b>Product code:</b> A9584C
<b>Recommended Use:</b>	Insecticide for use on cotton, citrus and tomatoes.
<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>	R 22 Harmful if swallowed R 36 Irritating to eyes
<b>Safety Phrases:</b>	-

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE	
<b>Chemical Identity of Pure Substance:</b>	Thiamethoxam
<b>Synonym:</b>	CGA293343
<b>CAS Number:</b>	153719-23-4

MIXTURE		
Chemical Identity of Ingredients	CAS No	Proportion (% w/w )
thiamethoxam	153719-23-4	25
diatomaceous earth	61790-53-2	<10
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 all contaminated clothing 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>	Poisoning symptoms in laboratory animals were non-specific.
<b>Medical Advice:</b>	There is no specific antidote available. Treat symptomatically.

## 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 extinguisher. DO NOT use direct jet of water.</p> <p><i>Extinguishing media - large fires</i> Use alcohol-resistant foam or water spray. DO NOT use direct jet of water.</p>
<b>Hazards from Combustion Products:</b>	This product contains combustible organic components that may burn and decompose during a fire producing dense black smoke containing hazardous products of combustion. Combustion products are toxic and /or irritant. Exposure to decomposition products may be a hazard to health.
<b>Special Protective Precautions and Equipment for Fire Fighters:</b>	When fighting a major fire wear self-contained breathing apparatus and protective equipment.

## Section 6: ACCIDENTAL RELEASE MEASURES

<b>Emergency Procedures:</b>	<p>In case of spillage it is important to take all steps necessary to</p> <ul style="list-style-type: none"><li>• Avoid eye and skin contact.</li><li>• Avoid contamination of waterways</li></ul>
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**Methods and Materials for Containment and Clean Up:**

**Procedure for spill:**

- (1) Keep all bystanders away.
- (2) Wear goggles, half face-piece respirator with combined dust and vapour cartridge, full length clothing and PVC gloves.
- (3) Reposition any leaking containers so as to minimise further leakage.
- (4) **For a product spill:** Sweep granule concentrates into a pile.  
**For a prepared spray spill:** Dam and absorb spill with an absorbent material (e.g. sand or soil).
- (5) Shovel the absorbed spill into drums.
- (6) Disposal of the absorbed material will depend upon the extent of the spill.
  - For quantities up to 50 kg of product bury in a secure landfill site.
  - For quantities greater than 50 kg seek advice (use emergency contact number below) from the manufacturer before attempting disposal. Contain in a secure location until disposal method is established.
- (7) Decontaminate the spill area with detergent and water and rinse with water

## Section 7: HANDLING AND STORAGE

**Precautions for Safe Handling:**

Will irritate the eyes and skin. Avoid contact with eyes and skin. If product in eyes, wash it out immediately with water. When opening the container and preparing spray wear:

- cotton overalls buttoned to the neck and wrist and a washable hat,
- elbow-length PVC gloves and
- goggles

When using (except aerial spraying) the prepared spray, wear

- cotton overalls buttoned to the neck and wrist and a washable hat and
- elbow-length PVC gloves.

Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

**Conditions for Safe Storage:**

Store in the closed, original container in a dry, cool, well-ventilated area out of 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>	Silica	10 mg/m <sup>3</sup>	TWA
<b>Syngenta Exposure Standards:</b>	Thiamethoxam	3 mg/m <sup>3</sup>	TWA
<b>Biological Limit Values:</b>	No biological limit allocated		
<b>Engineering Controls:</b>	No special requirements. Product is used outdoors.		

<b>Personal Protective Equipment:</b>	<p>Will irritate the eyes and skin. Avoid contact with eyes and skin. If product in eyes, wash it out immediately with water.</p> <p>When opening the container and preparing spray wear:</p> <ul style="list-style-type: none"> <li>• cotton overalls buttoned to the neck and wrist and a washable hat,</li> <li>• elbow-length PVC gloves and</li> <li>• goggles</li> </ul> <p>When using (except aerial spraying) the prepared spray, wear</p> <ul style="list-style-type: none"> <li>• cotton overalls buttoned to the neck and wrist and a washable hat and</li> <li>• elbow-length PVC gloves.</li> </ul> <p>Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.</p>
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## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Light brown granules	<b>Boiling Point/Range:</b>	Not applicable
<b>Odour:</b>	Musty	<b>Freezing/Melting Point:</b>	Not available
<b>pH:</b>	7 - 11 (1% aqueous dispersion)	<b>Solubility in water</b>	Dispersible
<b>Vapour Pressure:</b>	6.6 x 10 <sup>-9</sup> Pa (thiamethoxam)	<b>Specific Gravity or Density:</b>	0.42 –0.52 g/cm <sup>3</sup>
<b>Vapour Density:</b>	Not available		

<b>Flash point:</b>	Not available	<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>Ignition Temperature:</b>	Not available	<b>Combustibility:</b>	Not applicable
		<b>Corrosiveness:</b>	Not corrosive

## Section 10: STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable at normal ambient temperature and pressure.
<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>	Hazardous polymerization does not occur. At elevated temperatures it will undergo rapid, gas evolving thermal decomposition.

## Section 11: TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:		
<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 undiluted product. (LD <sub>50</sub> >5000 mg/kg)
	<b>Dermal toxicity:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product has a low toxicity following skin contact with the undiluted product. (LD <sub>50</sub> > 5000 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> (4 hr) >5.29 mg/L)
	<b>Skin irritation:</b>	<b>SLIGHT IRRITANT (rabbit)</b>
	<b>Eye irritation:</b>	<b>SLIGHT IRRITANT (rabbit)</b>
	<b>Sensitisation:</b>	<b>NOT A SKIN SENSITISER (Guinea pigs)</b>
<b>Chronic:</b>	<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 in 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.	

## Section 12: ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	<i>Toxicity to fish:</i>	<b>Practically non-toxic to fish</b> <i>Oncorhynchus mykiss</i> (rainbow trout): LC <sub>50</sub> >100 mg/L, 96 h
	<i>Toxicity to daphnia and other aquatic invertebrates:</i>	<b>Very highly toxic to certain aquatic invertebrates</b> <i>Daphnia magna</i> (Water flea): EC <sub>50</sub> >100 mg/L, 48 h <i>Cloeon sp.</i> (Mayfly): EC <sub>50</sub> = 56 µg/L, 48 h
	<i>Toxicity to algae:</i>	<b>Practically non-toxic to algae</b> <i>Pseudokirchneriella subcapitata</i> (green algae): E <sub>r</sub> C <sub>50</sub> >100 mg/L, 72 h
	<i>Toxicity to soil dwelling organisms:</i>	<b>Practically non-toxic to earthworms</b> <i>Eisenia foetida</i> (earthworm): LC <sub>50</sub> >1000 mg/kg
	<i>Bees:</i>	<b>Highly toxic to bees</b> Very toxic to bees by contact and oral application. Avoid spraying while bees are foraging.
<b>Persistence and Degradability:</b>	Not persistent in soil. Stable in water	
<b>Mobility</b>	Moderately mobile in soil	
<b>Environmental Fate (Exposure):</b>	Incorporated into C, N, O and H containing organic molecules	
<b>Bioaccumulative Potential:</b>	Thiamethoxam has shown no potential for bioaccumulation.	

### Section 13: DISPOSAL CONSIDERATIONS

<b>Disposal Methods and Containers:</b>	Single rinse before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. Puncture or shred 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>	3077	<b>Subsidiary Risk:</b>	None allocated
<b>UN Proper Shipping Name:</b>	Environmentally Hazardous Substance, Solid, N.O.S. (Thiamethoxam)	<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>	3077	<b>Subsidiary Risk:</b>	None allocated
<b>UN Proper Shipping Name:</b>	Environmentally Hazardous Substance, Solid, N.O.S. (Thiamethoxam)	<b>Packing Group:</b>	III
<b>Class:</b>	9		

### Section 15: REGULATORY INFORMATION

<b>APVMA Product Number:</b>	56499
<b>Poisons Schedule (SUSDP):</b>	5

## Section 16: OTHER INFORMATION

**Date of preparation or last revision:** May 2010

**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 Affairs Manager, Syngenta Crop Protection Pty Limited  
(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.

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