

## SAFETY DATA SHEET

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

<b>Product Name:</b>	<b>AFFIRM<sup>®</sup> Insecticide</b>
<b>Other Names:</b>	<b>Proper shipping name:</b> Environmentally Hazardous Substance, Liquid, N.O.S. (Emamectin Benzoate), <b>Applicable only for marine and air transport</b>
	<b>Product code:</b> A10325A
<b>Recommended Use:</b>	Insecticide for the control of <i>Heliothis</i> and suppression of mites and green mirids in cotton
<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>	R48 Danger of serious damage to health by prolonged exposure R41 Risk of serious damage to eyes R22 Harmful if swallowed
<b>Safety Phrases:</b>	—

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE		
<b>Chemical Identity of Pure Substance:</b>	Emamectin Benzoate	
<b>Synonym:</b>	MK244	
<b>CAS Number:</b>	155569-91-8	

  

MIXTURE		
Chemical Identity of Ingredients	CAS No	Proportion (%w/v)
Emamectin Benzoate	155569-91-8	1.7
1-hexanol	111-27-3	40 - 60
Other ingredients determined not to be hazardous	-	to 100

## Section 4: FIRST AID MEASURES

<p><b>Description of Necessary First Aid Measures:</b></p>	<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>
<p><b>Poisoning Symptoms:</b></p> <p><b>Medical Advice:</b></p>	<p>Lack of coordination Tremors Dilated pupils</p> <p>This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiazepines, valproic acid) in patients with potentially toxic mectin exposure. Toxicity can be minimised by early administration of chemical absorbents (e.g. activated charcoal). If toxicity from exposure has progressed to cause severe vomiting, the extent of resultant fluid and electrolyte imbalance should be gauged. Appropriate supportive parental fluid replacement therapy should be given, along with other required supportive measures as indicated by clinical signs, symptoms and measurements.</p>

## Section 5: FIRE FIGHTING MEASURES

<p><b>Suitable Extinguishing Media:</b></p>	<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>
<p><b>Hazards from Combustion Products:</b></p>	<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>
<p><b>Special Protective Precautions and Equipment for Fire Fighters:</b></p>	<p>Wear 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>	<b>Procedure for spill:</b> <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 (e.g. 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 50L of product bury in a secure landfill site.</li><li>• For quantities greater than 50L seek advice (use emergency contact number below) from the manufacturer 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 damage eyes. Will irritate skin. Avoid contact with eyes and skin. When opening the container and preparing spray, wear: <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> When using the prepared spray, wear: <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> If product in eyes, wash it out immediately with water. If product on skin, immediately wash area with soap and water. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.
<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

<b>National Exposure Standards:</b>	No exposure standard allocated		
<b>Syngenta Exposure Standards:</b>	<i>Component</i>	<i>Exposure limit</i>	
	emamectin benzoate	0.02	mg/m <sup>3</sup>
<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 damage eyes. Will irritate skin. Avoid contact with eyes and skin. 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 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>If product in eyes, wash it out immediately with water. If product on skin, immediately wash area with soap and water. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.</p>		

## Section 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Yellowish to brown liquid	<b>Boiling Point/Range:</b>	Not available
<b>Odour:</b>	Sweetish oily smell	<b>Freezing/Melting Point:</b>	Not available
<b>pH:</b>	4 – 8 at 1% w/v	<b>Solubility:</b>	Miscible in water
<b>Vapour Pressure:</b>	Not available	<b>Density:</b>	0.88 – 0.92 g/m <sup>3</sup>
<b>Vapour Density:</b>	Not available	<b>Viscosity, dynamic:</b>	30.2 mPa.s at 20°C 16.9 mPa.s at 40°C

<b>Flash Point:</b>	62°C (closed cup)	<b>Explosive Properties:</b>	Not explosive
<b>Upper and Lower Flammable (Explosive) Limits in Air:</b>	Non flammable	<b>Oxidising Properties:</b>	Not oxidising
<b>Auto Ignition Temperature:</b>	280 ± 2°C	<b>Combustibility:</b>	Combustible
		<b>Corrosiveness:</b>	Not corrosive to: tin plate, galvanized sheet metal, sheet steel, 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

Health Effects from Likely Routes of Exposure:	
<b>Acute:</b>	<p><b>Oral toxicity:</b>      <b>HARMFUL</b> Tests on rats indicate this product is harmful following single doses of undiluted product. A single exposure may damage the central and peripheral nervous systems. (LD<sub>50</sub> = 2,950 mg/kg)</p> <p><b>Dermal toxicity:</b>    <b>HARMFUL</b> Tests on rabbits indicate this product is harmful following skin contact with undiluted product. A single exposure may damage the central and peripheral nervous systems. (LD<sub>50</sub> &gt; 2,000 mg/kg)</p> <p><b>Inhalation:</b>            <b>HARMFUL</b> Tests on rats indicate this product is harmful due to inhalation of undiluted product. A single exposure may damage the central and peripheral nervous systems. (LC<sub>50</sub> (4h) = 9,600 mg/m<sup>3</sup>)</p> <p><b>Skin irritation:</b>        <b>MODERATE IRRITANT</b></p> <p><b>Eye irritation:</b>        <b>SEVERE IRRITANT</b></p> <p><b>Sensitisation:</b>        <b>NOT A SENSITISER</b></p>
<b>Chronic:</b>	<p><b>Emamectin benzoate technical</b> has been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, carcinogenic, teratogenic effects. Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments. Reproductive toxicity noted in rats that is not relevant to humans. Central nervous system effects in chronic/subchronic animal tests. No adverse effects in humans are expected at levels below the occupational exposure limit and when the product is handled and used according to the label.</p>

## Section 12: ECOLOGICAL INFORMATION

The following information is based on test results obtained with the active ingredient.	
<b>Ecotoxicity:</b>	<p><i>Toxicity to fish:</i>            <b>Moderately toxic to fish</b> <i>Salmo trutta</i> (trout): LC<sub>50</sub> = 8.3 mg/L, 96 h <i>Cyprinus carpio</i> (common carp): LC<sub>50</sub> &gt;100 mg/L, 96h</p> <p><i>Toxicity to daphnia and other aquatic invertebrates:</i>    <b>Highly toxic to aquatic invertebrates</b> <i>Daphnia magna</i> (Water flea): EC<sub>50</sub> = 0.05 mg/L, 48 h</p>
<b>Persistence and Degradability:</b>	Emamectin benzoate is not persistent in soil or water.
<b>Mobility</b>	Emamectin benzoate is immobile in soil.
<b>Environmental Fate (Exposure):</b>	Incorporated into organic molecules
<b>Bioaccumulative Potential:</b>	Emamectin benzoate does not bioaccumulate.

### 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>Subsidiary Risk:</b>	None allocated
<b>UN Proper Shipping Name:</b>	Environmentally Hazardous Substance, Liquid, N.O.S. (Emamectin Benzoate)	<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. (Emamectin Benzoate)	<b>Packing Group:</b>	III
<b>Class:</b>	9		

### Section 15: REGULATORY INFORMATION

<b>APVMA Product Number:</b>	51321
<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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