SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**AGADOR TURF NEMATICIDE AND MITICIDE**
Other Names:	**Proper shipping name:** Environmentally Hazardous Substance, Liquid, N.O.S. (abamectin) **Applicable only for marine and air transport** **Product code:** A12115I
Recommended Use:	Insecticide for the control of nematodes and Couchgrass Mite in turf
Company Details:	**Syngenta Australia Pty Ltd** ABN 33 002 933 717
Address:	**Level 1, 2-4 Lyonpark Road** **MACQUARIE PARK NSW 2113** **AUSTRALIA**
Telephone Number:	**(02) 8876 8444**
Emergency Telephone Number:	**24 hours - 1800 033 111**

Section 2: HAZARDS IDENTIFICATION

Hazard Classification:	Classified as a hazardous chemical according to the Australian criteria for the classification of chemicals
Risk Phrases:	R23/25 Toxic by inhalation and if swallowed
Safety Phrases:	–

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE	
Chemical Identity of Pure Substance:	Abamectin
Synonym:	Avermectin, MK936
CAS Number:	71751-41-2, 65195-55-3, 65195-56-4

MIXTURE		
Chemical Identity of Ingredients	**CAS No**	**Proportion (% w/v)**
Abamectin	71751-41-2 65195-55-3 65195-56-4	2
1,2-benzisothiazol-3-one	2634-33-5	<10
Sodium hydroxide	1310-73-2	<10
Other ingredients determined not to be hazardous	-	to 100

Section 4: FIRST AID MEASURES

Description of Necessary First Aid Measures:	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. **Ingestion:** If swallowed, seek medical advice immediately and show this container or label. DO NOT induce vomiting. **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. **Skin contact:** 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. **Inhalation:** Remove 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.
Poisoning Symptoms:	Lack of coordination, tremors, dilation of the pupil
Medical Advice:	This material is believed to enhance GABA activity in animals. It is probably wise to avoid drugs that enhance GABA activity (barbiturates, benzodiaziphines, valproic acid) in patients with potentially toxic mectin exposure. Toxicity can be minimized 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.

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Extinguishing media – small fires 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. Extinguishing media – large fires Use alcohol resistant foam or water spray. DO NOT use a solid water stream as it may scatter and spread fire.
Hazards from Combustion Products:	As this product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Combustion or thermal decomposition will evolve toxic and irritant vapours. Exposure to decomposition products may be a hazard to health
Special Protective Precautions and Equipment for Fire Fighters:	When fighting a major fire wear full protective clothing and self contained breathing apparatus.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	In case of spillage it is important to take all steps necessary to • Avoid eye and skin contact • Avoid contamination of waterways
Methods and Materials for Containment and Clean Up:	**Procedure for spill** (1) Keep all bystanders away (2) Wear full length clothing and PVC gloves (3) Reposition any leaking containers so as to minimise further leakage (4) Dam and absorb spill with an absorbent material (eg 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 L of product bury in a secure landfill site • 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 (7) Decontaminate spill area with detergent and water and rinse with the smallest volume of water practicable

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling:	Harmful if swallowed. Harmful if inhaled. May irritate the eyes. Avoid contact with eyes. DO NOT inhale spray mist. When opening the container, preparing the product for use and using the product wear: • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • elbow-length chemical resistant gloves • half face piece respirator with organic vapour/gas cartridge or canister Wash hands after use. After each day's use, wash gloves, respirator (if rubber, wash with detergent and warm water) and contaminated clothing.
Conditions for Safe Storage:	Store in the 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

	Component	*Exposure limit*	*Value type*
National Exposure Standards:	DL-propanediol-(1,2)	10 mg/m^3 (particulates only)	TWA
		474 mg/m^3 (vapour and particulates)	TWA
	Sodium hydroxide	2 Peak limitation	
Syngenta exposure standards:	Abamectin	0.02 mg/m^3	TWA
Biological Limit Values:	No biological limits allocated		
Engineering Controls:	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 vapors 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.		
Personal Protective Equipment:	Harmful if swallowed. Harmful if inhaled. May irritate the eyes. Avoid contact with eyes. DO NOT inhale spray mist. When opening the container, preparing the product for use and using the product wear: • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • elbow-length chemical resistant gloves • half face piece respirator with organic vapour/gas cartridge or canister Wash hands after use. After each day's use, wash gloves, respirator (if rubber, wash with detergent and warm water) and contaminated clothing.		

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark red to black liquid	**Boiling Point/Range:**	102^oC
Odour:	Sweet aromatic	**Freezing/Melting Point:**	Not available
pH:	5 to 9 (1% w/v)	**Solubility:**	Not applicable
Vapour Pressure:	Not available	**Specific Gravity or Density:**	1.198 g/mL at 20°C
Vapour Density:	Not available		

Flash Point:	Not detected below 102^oC, onset of boiling	**Explosive Properties:**	Not explosive
Upper and Lower Flammable (Explosive) Limits in Air:	Not flammable	**Oxidising Properties:**	Not oxidising
		Combustibility:	Not combustible
Ignition Temperature:	Not available	**Corrosiveness:**	Tin plate: corrosion, corrosion rate: 0.2 g/m^2h Galvanized sheet metal: corrosion, corrosion rate: 0.5 g/m^2h Sheet steel: corrosion, corrosion rate: 0.34 g/m^2h Stainless steel: no corrosion

Section 10: STABILITY AND REACTIVITY

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

Section 11: TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:

Acute:	**Oral toxicity:**	**HARMFUL** Tests on rats indicate this product is harmful following single doses of undiluted product LD_{50} = 1086 mg/kg
	Dermal toxicity:	**NOT HARMFUL** Tests on rabbits indicate this product is not harmful following skin contact with undiluted product. LD_{50} = >2000 mg/kg
	Inhalation:	**HARMFUL** Tests on rats indicate this product is harmful due to inhalation of undiluted product. LC_{50} (4 h) = >1.02 mg/L air
	Skin irritation:	**MILD IRRITANT**
	Eye irritation:	**SLIGHT IRRITANT**
	Sensitisation:	**NOT A SENSITISER**
Chronic:	Abamectin technical has been extensively tested in laboratory animals and test tube systems. No evidence of carcinogenic, teratogenic or mutagenic effects have been obtained. Reproductive toxicity noted in rats that is not relevant to humans. Central nervous system effects in chronic/subchronic animal tests.	

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:	*Toxicity to fish:*	**Highly toxic to fish** *Oncorhynchus mykiss* (rainbow trout): LC_{50} = 0.2 mg/L, 96 h (Based on tests conducted with ingredients)
	Toxicity to daphnia and other aquatic invertebrates:	**Very highly toxic to aquatic invertebrates** *Daphnia magna* (Water flea): EC_{50} = 0.01 mg/L, 48 h (Based on tests conducted with ingredients)
	Toxicity to algae:	**Practically non toxic to algae** *Pseudokirchneriella subcapitata* (green algae): E_bC_{50} = >100 mg/L, 72 h E_rC_{50} = >100 mg/L, 72 h (Based on tests conducted with ingredients)
	Toxicity to soil dwelling organisms:	**Moderately toxic to soil dwelling organisms**
	Bees:	**Highly toxic to bees**
Persistence and Degradability:	Not persistent in water (degradation half life 1.7 days) Not persistent in soil (degradation half life 15 to 52 days). Not readily biodegradable.	
Mobility	Slight mobility in soil.	
Environmental Fate (Exposure):	Fully degraded and incorporated into organic molecules.	
Bioaccumulative Potential:	Abamectin does not bioaccumulate.	

Section 13: DISPOSAL CONSIDERATIONS

Disposal Methods and Containers:	Triple or preferably pressure rinse containers before disposal. Add rinsings to the 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 deliver empty packaging to an approved waste management facility. If no facility is 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 Local, State or Territory government regulations. DO NOT burn empty containers or product.
Special Precautions for Landfill or Incineration:	Not applicable

Section 14: TRANSPORT INFORMATION

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

SEA TRANSPORT IMDG			
UN Number:	3082	**Subsidiary Risk:**	-
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (abamectin)	**Packing Group:**	III
Class:	9	**Marine Pollutant:**	Marine pollutant

AIR TRANSPORT IATA - DGR			
UN Number:	3082	**Subsidiary Risk:**	-
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (abamectin)	**Packing Group:**	III
Class:	9		

Section 15: REGULATORY INFORMATION

APVMA Product Number:	66380/102611
Poisons Schedule (SUSDP):	6

Section 16: OTHER INFORMATION

Date of preparation or last revision: February 2016

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 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 MSDS 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.