


## SAFETY DATA SHEET

### Section 1: Identification: Product identifier and chemical identity

<b>Product Identifier:</b>	<b>PENNMAG Turf Herbicide</b>
<b>Other Means of Identification:</b>	<b>Proper shipping name:</b> Environmentally Hazardous Substance, Liquid, N.O.S. (S-metolachlor) <b>Applicable only for marine and air transport</b>  <b>Product code:</b> A9396B
<b>Recommended Use:</b>	Herbicide for pre-emergent control of weeds in turf
<b>Details of manufacturer or importer</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>Website:</b>	<b>syngenta.com.au</b>
<b>Phone Number:</b>	<b>(02) 8876 8444</b>
<b>Emergency Phone Number:</b>	<b>24 hours - 1800 033 111</b>

### Section 2: Hazards identification

<b>Classification of the Hazardous Chemical:</b>	Eye irritation – Category 2 Acute toxicity – inhalation – Category 4 Skin sensitisation – Category 1A
<b>Signal Word:</b>	Warning
<b>Hazard Statement(s):</b>	H319 Causes serious eye irritation. H317 May cause an allergic skin reaction. H332 Harmful if inhaled.
<b>Precautionary Statement(s):</b>	P102 Keep out of reach of children. P280 Wear protective gloves/ protective clothing/ eye protection/face protection. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a POISON CENTRE or doctor/ physician if you feel unwell. P363 Wash contaminated clothing before reuse. P391 Collect spillage. P501 Dispose of contents/ container to an approved waste disposal plant.
<b>Hazard Symbols:</b>	

### Section 3: Composition and information on ingredients

SUBSTANCE	
<b>Chemical Identity of Pure Substance:</b>	S-metolachlor
<b>Synonym:</b>	CGA 77102
<b>CAS Number:</b>	87392-12-9

MIXTURE		
Chemical Identity of Ingredients:	CAS No	Proportion (% w/v)
S-metolachlor	87392-12-9	96
Mixture of aromatic hydrocarbons	64742-94-5	<10
Nonylphenol ethoxylate propoxylate	37251-69-7	<10
Nonylphenol polyglycoether sulfate and ethoxylated tallow alkyl amines (surfactant mixture)	9081-17-8 61791-26-2	<10
Non-hazardous ingredients	-	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: contains petroleum distillates and/or aromatic solvents.</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> Move the victim 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.</p>
<b>Symptoms Caused by Exposure:</b>	<p>Poisoning symptoms in laboratory animals were non-specific. Aspiration may cause pulmonary oedema and pneumonitis.</p>
<b>Medical Attention and Special Treatment:</b>	<p>There is no specific antidote available. Treat symptomatically. DO NOT induce vomiting: contains petroleum distillates and/or aromatic solvents.</p>

## Section 5: Fire fighting measures

<b>Suitable Extinguishing Equipment:</b>	<p><b>Small fires:</b> Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.</p> <p><b>Large fires:</b> Alcohol-resistant foam or water spray</p> <p>DO NOT use a solid water stream as it may scatter and spread fire.</p>
<b>Specific Hazards Arising from the Chemical:</b>	As the 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.
<b>Special Protective Equipment and Precautions 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.</p> <p>Cool closed containers exposed to fire with water spray.</p>

## Section 6: Accidental release measures

<b>Personal Precautions, Protective Equipment and 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> <p>Wear full length clothing and PVC gloves Keep all bystanders away</p>
<b>Environmental precautions:</b>	<p>Prevent further leakage or spillage if safe to do so. DO NOT flush into surface water or sanitary sewer system.</p>
<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>Will damage the eyes. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing.</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 (or equivalent clothing)</li> <li>• a washable hat</li> <li>• elbow-length PVC gloves</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 (or equivalent clothing)</li> <li>• a washable hat</li> <li>• elbow-length PVC gloves</li> <li>• face shield or goggles</li> </ul> <p>If product in eyes, wash it out immediately with 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, face shield or goggles and contaminated clothing.</p>
<b>Conditions for Safe Storage, Including any Incompatibilities:</b>	<p>Store in the closed, original container in a dry, cool, well ventilated area out of direct sunlight.</p>

## Section 8: Exposure controls and personal protection

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

<b>National Exposure Standards:</b>	No exposure standard allocated		
	<b>Component</b>	<b>Exposure limit</b>	<b>Value type</b>
<b>Syngenta Exposure Standards:</b>	S-metolachlor	10 mg/m <sup>3</sup>	8h TWA
<b>Supplier Exposure Standards:</b>	Mixture of aromatic hydrocarbons	100 mg/m <sup>3</sup>	8h TWA
		15 ppm	8h TWA
<b>Biological Limit Values:</b>	No biological limits allocated		
<b>Engineering Controls:</b>	No special requirements. Product is used outdoors.		
<b>Personal Protective Equipment:</b>	<p>Will damage the eyes. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing.</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 (or equivalent clothing)</li> <li>• a washable hat</li> <li>• elbow-length PVC gloves</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 (or equivalent clothing)</li> <li>• a washable hat</li> <li>• elbow-length PVC gloves</li> <li>• face shield or goggles</li> </ul> <p>If product in eyes, wash it out immediately with 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, face shield or goggles and contaminated clothing.</p>		

## Section 9: Physical and chemical properties

<b>Appearance:</b>	Yellowish to brown clear liquid	<b>Boiling Point/Range:</b>	Not available
<b>Odour:</b>	Not characteristic, weak	<b>Freezing/Melting Point:</b>	Not available
<b>pH:</b>	4 - 8 at 1% w/v	<b>Solubility:</b>	Miscible
<b>Vapour Pressure:</b>	Not available	<b>Specific Gravity or Density:</b>	1.085 - 1.125 g/cm <sup>3</sup>
<b>Viscosity, dynamic:</b>	110.7 mPa.s at 20°C 34.98 mPa.s at 40°C	<b>Surface tension:</b>	32.3 – 32.4 mN/m at 20°C

<b>Flash Point:</b>	120°C at 1,013.25 hPa (DIN 51758)	<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>	430°C	<b>Combustibility:</b>	Combustible C1
		<b>Corrosiveness:</b>	Not corrosive

## Section 10: Stability and reactivity

<b>Reactivity:</b>	No hazardous reactions by normal handling and storage according to provisions.
<b>Chemical Stability:</b>	The product is stable when used in normal conditions.
<b>Possibility of Hazardous Reactions:</b>	No hazardous reactions by normal handling and storage according to provisions.
<b>Conditions to Avoid:</b>	No decomposition if used as directed.
<b>Incompatible Materials:</b>	No substances are known which lead to the formation of hazardous substances or thermal reactions.
<b>Hazardous Decomposition Products:</b>	Combustion or thermal decomposition will evolve toxic and irritant vapours.

## 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> = 2,267 mg/kg
	<b>Dermal toxicity:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product as a low toxicity following skin contact with undiluted product. LD <sub>50</sub> .2,200 mg/kg
	<b>Inhalation:</b>	<b>LOW TOXICITY</b> Tests on rats indicate this product not harmful due to inhalation of undiluted product. LC <sub>50</sub> (4h) > 4.06 mg/L air
	<b>Skin irritation:</b>	<b>SLIGHT IRRITANT</b>
	<b>Eye irritation:</b>	<b>MODERATE IRRITANT</b>
	<b>Sensitisation:</b>	<b>SENSITISER</b>
<b>Chronic</b>	<b>S-metolachlor technical</b> has been extensively tested on laboratory mammals and in test tube systems. No evidence was obtained of mutagenic, carcinogenic, teratogenic or reproductive effects.	

## Section 12: Ecological information

<b>Ecotoxicity</b>	<b>Toxicity to fish:</b>	<b>Moderately toxic to fish</b> <i>Oncorhynchus mykiss</i> (rainbow trout): LC <sub>50</sub> = 4.3 mg/L, 96 h
	<b>Toxicity to daphnia and other aquatic invertebrates:</b>	<b>Slightly toxic to Daphnia</b> <i>Daphnia magna</i> (Water flea): EC <sub>50</sub> = 24.0 mg/L, 48 h
	<b>Toxicity to algae:</b>	<b>Highly toxic to algae</b> <i>Selenastrum capricornutum</i> (green algae): ErC <sub>50</sub> = 0.58 mg/L, 72 h
<b>Persistence and Degradability:</b>	S-metolachlor is not readily biodegradable. S-metolachlor is not persistent in water (Degradation half-life: 53 - 147 d). S-metolachlor is not persistent in soil (Degradation half-life: 12 - 46 d).	
<b>Mobility in Soil:</b>	S-metolachlor has medium mobility in soil.	
<b>Bioaccumulative Potential:</b>	S-metolachlor does not bioaccumulate.	

### Section 13: Disposal considerations

<b>Disposal Methods:</b>	<p><b>Refillable containers</b> Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p> <p><b>Other 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.</p>
<b>Special Precautions for Incineration or Landfill:</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>Transport Hazard Class:</b>	None allocated	<b>Hazchem or Emergency Action 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. (S-metolachlor)	<b>Packing Group:</b>	III
<b>Transport Hazard Class:</b>	9	<b>Environmental hazards for Transport Purposes:</b>	Marine pollutant

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

## Section 15: Regulatory information

APVMA Product Number: 69865

Poisons Schedule (SUSMP): 5

## Section 16: Any other relevant information

**Date of preparation or last revision:** November 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 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.