

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	DUAL[®] GOLD Herbicide
Other Names:	Proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (S-metolachlor) Applicable only for marine and air transport
	Product code: A9396B / A9396E
Recommended Use:	Herbicide for control of annual grasses and broadleaf weeds in certain crops
Company Details:	Syngenta Crop Protection Pty Limited 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:	R43 May cause sensitisation by skin contact
Safety Phrases:	—

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE	
Chemical Identity of Pure Substance:	S-metolachlor
Synonym:	CGA 77102
CAS Number:	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
Other ingredients determined not to be hazardous	-	to 100

Section 4: FIRST AID MEASURES

Description of Necessary First Aid Measures:	<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>Ingestion: If swallowed, seek medical advice immediately. DO NOT induce vomiting.</p> <p>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.</p> <p>Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. If skin irritation persists, call a doctor. Wash contaminated clothing before re-use.</p> <p>Inhalation: Remove to fresh air. If breathing is irregular or stopped, administer artificial respiration. Keep patient warm and at rest. Call a doctor or Poison Information Centre immediately.</p>
Poisoning Symptoms:	Poisoning symptoms in laboratory animals were non-specific
Medical Advice:	There is no specific antidote available. Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	<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>
Hazards from Combustion Products:	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.
Special Protective Precautions and Equipment for Fire Fighters:	<p>Wear protective clothing and self-contained breathing apparatus.</p> <p>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

Emergency Procedures:	In case of spillage it is important to take all steps necessary to <ul style="list-style-type: none">• Avoid eye and skin contact• Avoid contamination of waterways
Methods and Materials for Containment and Clean Up:	Procedure for spill <ol style="list-style-type: none">(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<ul style="list-style-type: none">• 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:	<p>Will damage the eyes. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. When opening the container and preparing spray wear:</p> <ul style="list-style-type: none">• cotton overalls buttoned to the neck and wrist (or equivalent clothing)• a washable hat• elbow-length PVC gloves• goggles <p>When using the prepared spray, wear:</p> <ul style="list-style-type: none">• cotton overalls buttoned to the neck and wrist (or equivalent clothing)• a washable hat• elbow-length PVC gloves• face shield or goggles <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>
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

National Exposure Standards:	No exposure standard allocated		
Syngenta Exposure Standards:	<i>Component</i>	<i>Exposure limit</i>	<i>Value type</i>
	S-metolachlor	10 mg/m ³	TWA
Biological Limit Values:	No biological limits allocated		
Engineering Controls:	No special requirements. Product is used outdoors.		
Personal Protective Equipment:	<p>Will damage the eyes. Avoid contact with eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. When opening the container and preparing spray wear:</p> <ul style="list-style-type: none"> • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • a washable hat • elbow-length PVC gloves • goggles <p>When using the prepared spray, wear:</p> <ul style="list-style-type: none"> • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • a washable hat • elbow-length PVC gloves • face shield or goggles <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

Appearance:	Yellowish to brown clear liquid	Boiling Point/Range:	Not available
Odour:	Not characteristic, weak	Freezing/Melting Point:	Not available
pH:	4 - 8 at 1% w/v	Solubility:	Miscible
Vapour Pressure:	Not available	Density:	1.085 - 1.125 g/cm ³
Viscosity, dynamic:	110.7 mPa.s at 20°C 34.98 mPa.s at 40°C	Surface tension:	32.3 – 32.4 mN/m at 20°C
Flash Point:	120°C at 1,013.25 hPa (DIN 51758)	Explosive Properties:	Not explosive
Upper and Lower Flammable (Explosive) Limits in Air:	Not available	Oxidising Properties:	Not oxidising
Auto Ignition Temperature:	430°C	Combustibility:	Combustible C1
		Corrosiveness:	Not corrosive

Section 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal 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:	LOW TOXICITY Tests on rats indicate this product has a low toxicity following single doses of undiluted product. (LD ₅₀ = 2,267 mg/kg)
	Dermal toxicity:	LOW TOXICITY Tests on rats indicate this product as a low toxicity following skin contact with undiluted product. (LD ₅₀ .2,20 mg/kg)
	Inhalation:	LOW TOXICITY Tests on rats indicate this product not harmful due to inhalation of undiluted product. LC ₅₀ (4h) > 4.06 mg/L air)
	Skin irritation:	NON IRRITANT
	Eye irritation:	NON IRRITANT
	Sensitisation:	SENSITISER
Chronic:	S-metolachlor technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence was obtained of mutagenic, carcinogenic or reproductive effects.	

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:	<i>Toxicity to fish:</i>	Moderately toxic to fish <i>Salmo trutta</i> (trout): LC ₅₀ = 4.3 mg/L, 96 h
	<i>Toxicity to daphnia and other aquatic invertebrates:</i>	Slightly toxic to Daphnia <i>Daphnia magna</i> (Water flea): EC ₅₀ = 24.0 mg/L, 48 h
Persistence and Degradability:	S-metolachlor is not persistent in soil or water.	
Mobility	S-metolachlor has medium mobility in soil.	
Bioaccumulative Potential:	S-metolachlor does not bioaccumulate.	

Section 13: DISPOSAL CONSIDERATIONS

Disposal Methods and Containers:	<p>Non-returnable containers: 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> <p>Returnable containers: Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p>
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:	None allocated
UN Proper Shipping Name:	Environmentally Hazardous Substance, Liquid, N.O.S. (S-metolachlor)	Packing Group:	III
Class:	9	Marine Pollutant:	Marine pollutant

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

Section 15: REGULATORY INFORMATION

APVMA Product Number:	50477
Poisons Schedule (SUSDP):	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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