

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	BARRICADE[®] Turf Herbicide
Other Names:	Proper shipping name: Environmentally Hazardous Substance, Liquid, N.O.S. (prodiamine) Applicable only for marine and air transport
	Product code: A12333D, A12333G
Recommended Use:	Herbicide for pre-emergent control of Crab Grass, Crowsfoot Grass, Summer Grass and Winter Grass in established turf
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:	Prodiamine
Synonym:	SAN 745
CAS Number:	29091-21-2

MIXTURE		
Chemical Identity of Ingredients	CAS No	Proportion (% w/w)
Prodiamine	29091-21-2	40
Propylene glycol	57-55-6	30-60
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. Sip water if able to swallow. DO NOT give anything by mouth to an unconscious person</p> <p>Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Seek medical advice</p> <p>Skin contact: Take off all contaminated clothing immediately. Wash off immediately with plenty of water. Wash contaminated clothing before re-use. Seek medical advice</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 Poisons Information Centre immediately</p>
Poisoning Symptoms: Medical Advice:	<p>Irritating to eyes and skin. May cause sensitisation by skin contact.</p> <p>There is no specific antidote available. Treat symptomatically. Persons suffering a temporary allergic reaction may respond to treatment with antihistamines or steroid creams and/or systemic steroids.</p>

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	<p><i>Small fires</i> Use dry chemical, foam or CO₂</p> <p><i>Large fires</i> Use dry chemical, foam or CO₂ DO NOT use a solid water stream as it may scatter and spread fire</p>
Hazards from Combustion Products:	<p>May decompose at high temperatures forming toxic gases. Irritating and possibly toxic gases may be generated by thermal decomposition or combustion.</p>
Special Protective Precautions and Equipment for Fire Fighters:	<p>In the event of fire, wear self-contained breathing apparatus and protective clothing.</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 goggles, half face-piece respirator with combined dust and vapour cartridge, full length waterproof clothing and elbow-length PVC gloves(3) Reposition any leaking containers so as to minimise leakage.(4) Dam and absorb spill with an absorbent material (e.g. sand or soil)(5) Shovel the absorbed material 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:	May irritate the eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Avoid contact with eyes and skin. When opening the container, preparing spray and using prepared spray wear: <ul style="list-style-type: none">• cotton overalls buttoned to the neck and wrist (or equivalent clothing)• elbow-length chemical resistant gloves If product on skin, immediately wash area with soap and water. Wash hands after use. After each day's use wash gloves 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

	<i>Component</i>	<i>Exposure limit</i>	<i>Value type</i>
National Exposure Standards:	Propylene glycol	10 mg/m ³	8h TWA
Syngenta Exposure Standards:	Prodiamine	10 mg/m ³	8h TWA
Biological Limit Values:	No biological limit allocated		
Engineering Controls:	No special requirements. Product is used outdoors		
Personal Protective Equipment:	<p>May irritate the eyes and skin. Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. Avoid contact with eyes and skin.</p> <p>When opening the container, preparing spray and using prepared spray wear:</p> <ul style="list-style-type: none"> cotton overalls buttoned to the neck and wrist (or equivalent clothing) elbow-length chemical resistant gloves <p>If product on skin, immediately wash area with soap and water. Wash hands after use. After each day's use wash gloves and contaminated clothing.</p>		

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow liquid	Boiling Point/Range:	Not available
Odour:	Weak ammonia	Melting Point:	Not applicable
pH:	8-10 (1% suspension in water)	Solubility:	0.013 ppm at 25°C
Vapour Pressure:	<5.6 x 10 ⁻⁶ mmHg at 20°C	Specific Gravity or Density:	1.17 g/mL at 20°C
Vapour Density:	Not available		
Flash Point:	>100°C	Explosive Properties:	Not applicable
Upper and Lower Flammable (Explosive) Limits in Air:	Not flammable	Oxidising Properties:	Not applicable
Ignition Temperature:	Not available	Combustibility:	Not applicable
		Corrosiveness:	Not corrosive

Section 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under normal use and storage conditions
Conditions to Avoid:	Keep away from moisture, heat or flame. Keep away from thermal, mechanical and electrical ignition sources
Incompatible Materials:	Oxidising agents
Hazardous Decomposition Products:	May decompose at high temperatures forming toxic gases
Hazardous Reactions:	None known Hazardous polymerisation will not occur

Section 11: TOXICOLOGICAL INFORMATION

Health Effects from Likely Routes of Exposure:

Acute:	Oral toxicity:	Low toxicity LD ₅₀ = >5,000 mg/kg (rat)
	Dermal toxicity:	Low toxicity LD ₅₀ = >5,000 mg/kg (rabbit)
	Inhalation:	Low toxicity LC ₅₀ (4 hour) = >2.55 mg/L (rat)
	Skin irritation:	Slightly irritant (rabbit)
	Eye irritation:	Minimally irritant (rabbit)
	Sensitisation:	Sensitising (guinea pig)
Chronic:	Studies with prodiamine showed liver (alteration and enlargement) and thyroid effects (hormone imbalances) at high dose levels (rats). Prodiamine produced benign thyroid tumors in rats, none were observed in mice.	

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Highly toxic to fish and invertebrates LC ₅₀ (96 hours) = 0.83 ppm Rainbow Trout LC ₅₀ (96 hours) = 0.55 ppm Bluegill Sunfish LC ₅₀ (48 hours) = 0.66 ppm <i>Daphnia magna</i> Low toxicity to birds LC ₅₀ (8 days) = >10,000 ppm Bobwhite Quail LC ₅₀ (8 days) = >10,000 ppm Mallard Duck Low toxicity to bees LD ₅₀ /EC ₅₀ = >100 µg/bee
Persistence and Degradability:	Prodiamine is persistent and immobile in soil Prodiamine is stable in water and sinks after 24 hours
Bioaccumulative Potential:	Prodiamine does not bioaccumulate

Section 13: DISPOSAL CONSIDERATIONS

Disposal Methods and 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
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. (Prodiamine)	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. (Prodiamine)	Packing Group:	III
Class:	9		

Section 15: REGULATORY INFORMATION

APVMA Product Number:	62982
Poisons Schedule (SUSDP):	Exempt

Section 16: OTHER INFORMATION

Date of preparation or last revision: March 2008
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.