

## SAFETY DATA SHEET

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

<b>Product Name:</b>	<b>BARRICADE<sup>®</sup> Herbicide</b>
<b>Other Names:</b>	<b>Proper shipping name:</b> Environmentally Hazardous Substance, Liquid, N.O.S. (prodiamine) <b>Applicable only for marine and air transport</b>
	<b>Product code:</b> A12333D, A12333G
<b>Recommended Use:</b>	For pre-emergent control of weeds in established turf, garden beds and nursery pots
<b>Company Details:</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>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>	R43 May cause sensitisation by skin contact
<b>Safety Phrases:</b>	—

### Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE	
<b>Chemical Identity of Pure Substance:</b>	Prodiamine
<b>Synonym:</b>	SAN 745
<b>CAS Number:</b>	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

<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. DO NOT induce vomiting. Sip water if able to swallow. DO NOT give anything by mouth to an unconscious person</p> <p><b>Eye contact:</b> Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Seek medical advice</p> <p><b>Skin contact:</b> Take off all contaminated clothing immediately. Wash off immediately with plenty of water. Wash contaminated clothing before re-use. Seek medical advice</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 doctor or Poisons Information Centre immediately</p>
<p><b>Poisoning Symptoms:</b> <b>Medical Advice:</b></p>	<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

<p><b>Suitable Extinguishing Media:</b></p>	<p><i>Small fires</i> Use dry chemical, foam or CO<sub>2</sub></p> <p><i>Large fires</i> Use dry chemical, foam or CO<sub>2</sub> DO NOT use a solid water stream as it may scatter and spread fire</p>
<p><b>Hazards from Combustion Products:</b></p>	<p>May decompose at high temperatures forming toxic gases. Irritating and possibly toxic gases may be generated by thermal decomposition or combustion.</p>
<p><b>Special Protective Precautions and Equipment for Fire Fighters:</b></p>	<p>In the event of fire, wear self-contained breathing apparatus and protective clothing.</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 goggles, half face-piece respirator with combined dust and vapour cartridge, full length waterproof clothing and elbow-length PVC gloves</li><li>(3) Reposition any leaking containers so as to minimise leakage.</li><li>(4) Dam and absorb spill with an absorbent material (e.g. sand or soil)</li><li>(5) Shovel the absorbed material 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>	Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. When opening the container, preparing spray and using prepared spray wear: <ul style="list-style-type: none"><li>• cotton overalls buttoned to the neck and wrist (or equivalent clothing)</li><li>• elbow-length chemical resistant gloves</li></ul> If applying by high pressure hand wand, wear: <ul style="list-style-type: none"><li>• cotton overalls, over normal clothing, buttoned to the neck and wrist</li><li>• a washable hat</li><li>• elbow length chemical resistant gloves</li></ul> 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.
<b>Conditions for Safe Storage:</b>	Keep out of reach of children. 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>
<b>National Exposure Standards:</b>	Propylene glycol	10 mg/m <sup>3</sup>	8h TWA
<b>Syngenta Exposure Standards:</b>	Prodiamine	10 mg/m <sup>3</sup>	8h TWA
<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>Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. When opening the container, preparing spray and using prepared spray wear:</p> <ul style="list-style-type: none"> <li>• cotton overalls buttoned to the neck and wrist (or equivalent clothing)</li> <li>• elbow-length chemical resistant gloves</li> </ul> <p>If applying by high pressure hand wand, wear:</p> <ul style="list-style-type: none"> <li>• cotton overalls, over normal clothing, buttoned to the neck and wrist</li> <li>• a washable hat</li> <li>• elbow length chemical resistant gloves</li> </ul> <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

<b>Appearance:</b>	Yellow liquid	<b>Boiling Point/Range:</b>	Not available
<b>Odour:</b>	Weak ammonia	<b>Melting Point:</b>	Not applicable
<b>pH:</b>	8-10 (1% suspension in water)	<b>Solubility:</b>	0.013 ppm at 25°C
<b>Vapour Pressure:</b>	<5.6 x 10 <sup>-6</sup> mmHg at 20°C	<b>Specific Gravity or Density:</b>	1.17 g/mL at 20°C
<b>Vapour Density:</b>	Not available		

<b>Flash Point:</b>	>100°C	<b>Explosive Properties:</b>	Not applicable
<b>Upper and Lower Flammable (Explosive) Limits in Air:</b>	Not flammable	<b>Oxidising Properties:</b>	Not applicable
<b>Ignition Temperature:</b>	Not available	<b>Combustibility:</b>	Not applicable
		<b>Corrosiveness:</b>	Not corrosive

## Section 10: STABILITY AND REACTIVITY

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

## Section 11: TOXICOLOGICAL INFORMATION

### Health Effects from Likely Routes of Exposure:

<b>Acute:</b>	<b>Oral toxicity:</b>	<b>Low toxicity</b> LD <sub>50</sub> = >5,000 mg/kg (rat)
	<b>Dermal toxicity:</b>	<b>Low toxicity</b> LD <sub>50</sub> = >5,000 mg/kg (rabbit)
	<b>Inhalation:</b>	<b>Low toxicity</b> LC <sub>50</sub> (4 hour) = >2.55 mg/L (rat)
	<b>Skin irritation:</b>	<b>Slightly irritant</b> (rabbit)
	<b>Eye irritation:</b>	<b>Minimally irritant</b> (rabbit)
	<b>Sensitisation:</b>	<b>Sensitising</b> (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

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

## Section 13: DISPOSAL CONSIDERATIONS

<b>Disposal Methods and Containers:</b>	Triple 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 deliver empty packaging to an approved waste management facility. If an approved waste management facility is not 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 relevant local, state or territory government regulations. DO NOT burn empty containers or product.
<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. (Prodiamine)	<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. (Prodiamine)	<b>Packing Group:</b>	III
<b>Class:</b>	9		

### Section 15: REGULATORY INFORMATION

<b>APVMA Product Number:</b>	62982
<b>Poisons Schedule (SUSDP):</b>	Exempt

## Section 16: OTHER INFORMATION

**Date of preparation or last revision:** October 2015

**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 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.