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Date of Issue: October 2015

SAFETY DATA SHEET

Section 1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: BARRICADE® 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: For pre-emergent control of weeds in established turf, garden

beds and nursery pots

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: R43 May cause sensitisation by skin contact

Safety Phrases: –

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE

Chemical Identity of Pure Substance:ProdiamineSynonym:SAN 745CAS 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 In case of poisoning by any exposure route contact a doctor or First Aid Measures: 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. DO NOT induce vomiting. Sip water if able to swallow. DO NOT give anything by mouth to an unconscious person Rinse immediately with plenty of water, also under Eye contact: the eyelids, for at least 15 minutes. Remove contact lenses. Seek medical advice Take off all contaminated clothing immediately. Skin contact: Wash off immediately with plenty of water. Wash contaminated clothing before re-use. Seek medical advice 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 **Poisoning Symptoms:** Irritating to eyes and skin. May cause sensitisation by skin contact. **Medical Advice:** 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.

Section 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Small fires

Use dry chemical, foam or CO₂

Large fires

Use dry chemical, foam or CO₂

DO NOT use a solid water stream as it may scatter and

spread fire

Hazards from Combustion

Products:

May decompose at high temperatures forming toxic gases.

Irritating and possibly toxic gases may be generated by

thermal decomposition or combustion.

Special Protective Precautions and Equipment for Fire Fighters:

In the event of fire, wear self-contained breathing apparatus

and protective clothing.

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 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
 - 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:

Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing.

When opening the container, preparing spray and using prepared spray wear:

- cotton overalls buttoned to the neck and wrist (or equivalent clothing)
- elbow-length chemical resistant gloves

If applying by high pressure hand wand, wear:

- cotton overalls, over normal clothing, buttoned to the neck and wrist
- a washable hat
- 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:

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

	Component	Exposure limit	Value type
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 allo	ocated	
Engineering Controls:	No special requirements. Product is used outdoors		
Personal Protective Equipment:	Repeated exposure may cause allergic disorders. Sensitive workers should use protective clothing. When opening the container, preparing spray and using prepared spray wear: • cotton overalls buttoned to the neck and wrist (or equivalent clothing) • elbow-length chemical resistant gloves If applying by high pressure hand wand, wear: • cotton overalls, over normal clothing, buttoned to the neck and wrist • a washable hat • 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.		

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	Not flammable	Oxidising Properties:	Not applicable
Flammable (Explosive) Limits in Air:		Combustibility:	Not applicable
Ignition Temperature:	Not available	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

 $LD_{50} = >5,000 \text{ mg/kg (rat)}$

Dermal toxicity: Low toxicity

 $LD_{50} = >5,000 \text{ mg/kg (rabbit)}$

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 *Daphnia magna*

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

Prodiamine is persistent and immobile in soil

Degradability:

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 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.

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: 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.