

SAFETY DATA SHEET

Section 1: Identification: Product identifier and chemical identity

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| Product Identifier: | BARRICADE® Herbicide |
| Other Means of Identification: | 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 |
| Details of manufacturer or importer | Syngenta Australia Pty Ltd ABN 33 002 933 717 |
| Address: | Level 1, 2-4 Lyonpark Road MACQUARIE PARK NSW 2113 AUSTRALIA |
| Website: | syngenta.com.au |
| Phone Number: | (02) 8876 8444 |
| Emergency Phone Number: | 24 hours - 1800 033 111 |

Section 2: Hazards identification

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| Classification of the Hazardous Chemical: | Not classified as hazardous under GHS criteria. |
| Signal Word: | - |
| Hazard Statement(s): | - |
| Precautionary Statement(s): | - |
| Hazard Symbols: | - |

Section 3: Composition and information on ingredients

| SUBSTANCE | |
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| 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 |
| Non-hazardous ingredients | - | to 100 |

Section 4: First aid measures

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| <p>Description of Necessary First Aid Measures:</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. 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> |
| <p>Symptoms Caused by Exposure:</p> | <p>Irritating to eyes and skin. May cause sensitisation by skin contact.</p> |
| <p>Medical Attention and Special Treatment:</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

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| <p>Suitable Extinguishing Equipment:</p> | <p>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</p> |
| <p>Specific Hazards Arising from the Chemical:</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>Special Protective Equipment and Precautions for Fire Fighters:</p> | <p>In the event of fire, wear self-contained breathing apparatus and protective clothing</p> |

Section 6: Accidental release measures

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| <p>Personal Precautions, Protective Equipment and Emergency Procedures:</p> | <p>In case of spillage it is important to take all steps necessary to</p> <ul style="list-style-type: none"> • Avoid eye and skin contact • Avoid contamination of waterways |
| <p>Environmental precautions:</p> | <p>Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations If the product contaminates rivers and lakes or drains inform respective authorities.</p> |

Methods and Materials for Containment and Clean Up:

Procedure for spill

- (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
 - 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, Including any Incompatibilities:

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 and personal protection

ALWAYS READ AND FOLLOW THE LABEL INSTRUCTIONS AND WARNINGS

| | Component | Exposure limit | Value type |
|---------------------------------------|--|----------------|------------|
| National Exposure Standards: | Propylene glycol | 10 mg/L | TWA |
| Syngenta Exposure Standards: | Prodiamine | 10 mg/L | TWA |
| Biological Limit Values: | No biological limits allocated | | |
| 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: <ul style="list-style-type: none"> • 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

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| Appearance: | Yellow liquid | Boiling Point/Range: | Not available |
| Odour: | Weak ammonia | Freezing/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 | | |

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|---|---------------|------------------------------|----------------|
| 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

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| Chemical Stability: | Stable under normal use and storage conditions. |
| Possibility of Hazardous Reactions: | None known. Hazardous polymerisation will not occur. |
| 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. |

Section 11: Toxicological information

| Health Effects from Likely Routes of Exposure: | | |
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| Acute | Oral toxicity: | LOW TOXICITY Tests on rats indicate this product has a low toxicity following single doses of undiluted product. LD ₅₀ =5,000 mg/kg |
| | Dermal toxicity: | LOW TOXICITY Tests on rabbits indicate this product has a low toxicity following skin contact with undiluted product/ LD ₅₀ =5,000 mg/kg |
| | Inhalation: | LOW TOXICITY Tests on rats indicate this product is not harmful due to inhalation of undiluted product. LC ₅₀ (4h) =>2.55 mg/L air |
| | Skin irritation: | SLIGHT IRRITANT |
| | Eye irritation: | SLIGHT IRRITANT |
| | Sensitisation: | NOT A SENSITISER |

Chronic Prodiamine technical has been extensively tested on laboratory mammals and in test tube systems. 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

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| Ecotoxicity | <p>Toxicity to fish: Highly toxic to fish <i>Oncorhynchus mykiss</i> (rainbow trout): LC₅₀ = 0.83 mg/L, 96 h <i>Lepomis macrochirus</i> (bluegill): LC₅₀ = 0.55 mg/L, 96h</p> <p>Toxicity to daphnia and other aquatic invertebrates: Highly toxic to Daphnia <i>Daphnia magna</i> (Water flea): EC₅₀ = 0.66 mg/L, 48 h</p> <p>Toxicity to algae: Moderately toxic to algae <i>Pseudokirchneriella subcapitata</i> (green algae): E_rC₅₀ = 0.104 mg/L, 96 h</p> <p>Toxicity to honey bees Low Toxicity to bees <i>Apis mellifera</i> Oral LD₅₀ (48 hour) >109 ug ai/bee Contact LD₅₀ (48 hour) >100 ug ai/bee</p> <p>Toxicity to soil dwelling organisms: Practically non-toxic to earthworms <i>Eisenia foetida</i> (earthworm): LC₅₀ >1000 mg/kg, 14 day</p> |
| Persistence and Degradability: | <p>Prodiamine is persistent in soil Prodiamine is stable in water and sinks after 24 hours</p> |
| Mobility in Soil: | Prodiamine is immobile in soil |
| Bioaccumulative Potential: | Prodiamine does not bioaccumulate |

Section 13: Disposal considerations

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| Disposal Methods: | 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 Incineration or Landfill: | Not applicable |

Section 14: Transport information

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| 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 |
| Transport Hazard Class: | None allocated | Hazchem or Emergency Action Code: | None allocated |
| Subsidiary Risk: | None allocated | | |

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|---------------------------------|--|--|------------------|
| 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 |
| Transport Hazard Class: | 9 | Environmental hazards for Transport Purposes: | Marine pollutant |

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|------------------------------------|--|-------------------------|----------------|
| 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 |
| Transport Hazard Class: | 9 | | |

Section 15: Regulatory information

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| APVMA Product Number: | 62982 |
| Poisons Schedule (SUSMP): | Exempt |

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.