

Infosafe No™ 3NUYE Issue Date : June 2017 ISSUED by NUFARM

 Product Name **Barrage Herbicide**

Classified as hazardous

1. Identification

GHS Product Identifier Barrage Herbicide
Product Code 0867
Product Type Group C Herbicide
Company Name NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)
Address 103-105 Pipe Road Laverton North
 Victoria 3026 Australia
Telephone/Fax Number Tel: +61 3 9282-1000
 Fax: +61 3 9282-1001
Emergency phone number 1800 033 498 (24hr Australia)
Recommended use of the chemical and restrictions on use For the control of a wide range of annual and perennial grasses, broadleaf weeds and vines in established sugar cane as per the Directions for Use table on the label.
Other Information This Safety Data Sheet describes the properties of the concentrated product. The physical properties and the assessments may not apply to the properties of the product once it has been diluted for application.

2. Hazard Identification

GHS classification of the substance/mixture CA2 Carcinogenicity: Category 2
 RE2 STOT Repeated Exposure Category 2
 AC1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
Signal Word (s) WARNING
Hazard Statement (s) H351 Suspected of causing cancer.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H410 Very toxic to aquatic life with long lasting effects.
General Precautionary Statement (s) P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P103 Read label before use.
Pictogram (s) Health hazard, Environment,
 The below pictograms are GHS Hazard symbols for workplace use only.
 See SECTION 14 for Dangerous Goods information.



Precautionary statement – Prevention P202 Do not handle until all safety precautions have been read and understood.
 P281 Use personal protective equipment as required.
 P260 Do not breathe dust or spray.
Precautionary statement – Response P308+P313 IF exposed or concerned: Get medical advice/attention.
Other Information Poisons Schedule S5

3. Composition/information on ingredients

Chemical Characterization Solid

Ingredients	Name	CAS	Proportion
	Diuron	330-54-1	468 g/kg
	Hexazinone tech.	51235-04-2	132 g/kg
	Anionic Components		0-10 %
	Other ingredients (non-hazardous)		30-60 %

4. First-aid measures

Inhalation Remove affected person to fresh air until recovered. If symptoms develop or

Infosafe No™ 3NUYE	Issue Date : June 2017	ISSUED by NUFARM
--------------------	------------------------	------------------

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Ingestion persist, seek medical advice.
Rinse mouth and then drink plenty of water.
If vomiting occurs, give more water to drink to assist dilution.
Do not give anything by mouth to a semi-conscious or unconscious person.
If swallowed do NOT induce vomiting; seek medical advice immediately and show this container or label or contact the Poisons Information Centre on 13 11 26 (Aust). Make every effort to prevent vomit from entering the lungs by careful placement of the patient.

Skin Wash affected areas thoroughly with soap and water.
Remove contaminated clothing and launder before re-use.

Eye contact If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.
Seek medical advice immediately.

First Aid Facilities If poisoning occurs, contact a doctor or the Poisons Information Centre (Australia) on 13 11 26.

Advice to Doctor Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media Water fog, foam, carbon dioxide or dry chemical.

Hazards from Combustion Products If involved in a fire, it may emit oxides of nitrogen and possibly cyanide, hydrogen chloride or phosgene.

Special Protective Equipment for fire fighters Breathable air apparatus must be worn when fighting a fire in which this product is involved.

Other Information STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

6. Accidental release measures

Spills & Disposal Recover the product by sweeping up or vacuuming without raising dust.
Collect spilled material and waste in sealable open-top type containers for disposal.
On-site disposal of concentrate is not acceptable.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

7. Handling and storage

Precautions for Safe Handling Avoid generating dusts while handling the product and mixing.
Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers.
If dusts are generated, it is advisable to wear a dust mask, refer Section 8.
Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.

Conditions for safe storage, including any incompatibilities Store in the closed, original container in a dry, well ventilated area out of direct sunlight.

Other Information Always read the label and any attached leaflet before use.

8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
Appropriate engineering controls Respiratory Protection Personal Protective Equipment	Diuron			10		
	Handle in well ventilated areas, generally natural ventilation is adequate.					
	If dusts are present, wear a class P1 dust mask.					
When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat,						

Infosafe No™ 3NUYE	Issue Date : June 2017	ISSUED by NUFARM
--------------------	------------------------	------------------

Product Name **Barrage Herbicide**

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Hygiene Measures elbow-length PVC gloves and goggles.
After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.
After each day's use, wash contaminated clothing and safety equipment.

Requirements Concerning Special Training Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

9. Physical and chemical properties

Form Solid

Appearance Beige Granules

Solubility in Water Disperses in water.

Vapour Pressure 1.25 x 10⁻⁵ mPa (diuron); 0.03 mPa (hexazinone)

Partition Coefficient: n-octanol/water Kow Log P is 2.7 (diuron, pH7); 1.2 (hexazinone, pH7)

Flammability Non combustible material.

Other Information pKa is 2.2 (hexazinone, 25°C)

10. Stability and reactivity

Chemical Stability Stable under normal conditions.

Hazardous Polymerization Hazardous polymerisation is not possible.

11. Toxicological Information

Acute Toxicity - Oral LD50 (rat) >2000 mg/kg for the formulated product

Acute Toxicity - Dermal LD50 (rat) >2000 mg/kg for the formulated product

Acute Toxicity - Inhalation LC50 (rat) (4hr) >5 mg/l for the formulated product

Ingestion Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury.

Inhalation May cause irritation to mucous membranes.

Skin May irritate the skin.

Eye The concentrate will cause irritation of the eyes.

Skin Sensitisation Product is not a skin sensitiser.

Carcinogenicity Suspected human carcinogen based on limited evidence from studies on humans or laboratory animals.

Reproductive Toxicity Data indicates no reproductive effects.
Data indicates no teratogenic effects.

Serious eye damage/irritation Mild eye irritant.

Mutagenicity Data indicates no mutagenic effects.

Skin corrosion/irritation Mild skin irritant.

Other Information The Australian Acceptable Daily Intake (ADI) for diuron for a human is 0.007 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.7 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of Health, Office of Chemical Safety, 'ADI List', March 2016).
ADI for hexazinone is 0.1 mg/kg/day, NOEL 10 mg/kg/day.

12. Ecological information

Other Precautions Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.

Infosafe No™ 3NUYE	Issue Date : June 2017	ISSUED by NUFARM
--------------------	------------------------	------------------

 Product Name **Barrage Herbicide**

Classified as hazardous

Environmental Protection	Spray drift can cause damage, read the label for more information.
Acute Toxicity - Fish	LC50 (96hr) for zebrafish (danio rerio) is 67 mg/l for the formulated product
Acute Toxicity - Daphnia	LC50 (48hr) for the product is 54 mg/l.
Acute Toxicity - Algae	EC50 (72hr) for algae 0.017 mg/l.
Acute Toxicity - Other Organisms	Not toxic to birds. LD50 for bobwhite quail is 1730 mg/kg for diuron LD50 for bobwhite quail is 2258 mg/kg for hexazinone Bees: Not toxic to bees. LD50 for hexazinone is >60 µg/bee.

13. Disposal considerations

Product Disposal	On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).
Container Disposal	Do not use this container for any other purpose. Shake the last amount of product from the bag into application equipment. Single rinse before disposal. Add rinsings to spray tank Do not dispose of undiluted chemicals on site. Puncture or shred and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm 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.

14. Transport information

Storage and Transport	Considered non dangerous for road and rail transport (in packaging) by the Australian Code for the Transport of Dangerous Goods by Road and Rail. Ref: ADG7; SP No. AU01. For bulk shipments as Class 9, use UN 3077, HazChem code 2Z.
UN Number (Sea Transport)	3077
IMO Class/Packing Group	Class 9; Packing Group III
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains Diuron and Hexazinone)

15. Regulatory information

Regulatory Information	Australia: WHS regulations (2011) - Schedule 11: classification not listed.
Poisons Schedule	S5
Packaging & Labelling	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Other Information	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 59557.

16. Other Information

Date of preparation or last revision of SDS	14/06/2017
Contact Person/Point	Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498
Revisions Highlighted	The SDS was reviewed. Minor changes were made to the information and product has been rebranded. ...End Of MSDS...



Safety Data Sheet

infosafe
CS: 1.7.2

Page: 5 of 5

Infosafe No™ 3NUYE

Issue Date : June 2017

ISSUED by NUFARM

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Classified as hazardous

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