

Infosafe No™ NU00M	Issue Date : November 2014	ISSUED by NUFARM
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Product Name **DIURON Flowable Liquid Herbicide**

Classified as hazardous

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	DIURON Flowable Liquid Herbicide		
Product Code	0310		
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		
Emergency Tel.	1800 033 498 (24hr Australia)		
Telephone/Fax Number	Tel: +61 3 9282-1000 Fax: +61 3 9282-1001		
Recommended Use	For the control of weeds in certain crops, as per the Directions for Use table on the label.		
Other Names	<u>Name</u>	<u>Product Code</u>	
	Flowable Diuron Liquid Herbicide	0310	
Other Information	This Safety Data Sheet describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.		

2. HAZARDS IDENTIFICATION

Hazard Classification	Classified as hazardous HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. Hazard classification according to the criteria of NOHSC. Dangerous goods classification according to the Australia Dangerous Goods Code.
Risk Phrase(s)	Classified as hazardous R22 Harmful if swallowed. R40 Limited evidence of a carcinogenic effect. R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.
Safety Phrase(s)	S13 Keep away from food, drink and animal feeding stuffs. S2 Keep out of reach of children. S36/37 Wear suitable protective clothing and gloves. S46 If swallowed, seek medical advice immediately and show this container or label.
Other Information	Poisons Schedule S5

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Diuron	330-54-1	500 g/L
	Ethylene glycol	107-21-1	52 g/L
	Dispersants		10-30 %
	Water		30-60 %

4. FIRST AID MEASURES

Inhalation	Over-exposure by inhalation is improbable. Check for other causes of observed symptoms and seek medical advice.
Ingestion	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	If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.

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Advice to Doctor Seek medical advice.
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.
Hazards from Combustion	If involved in a fire, the dehydrated components may emit oxides of carbon and nitrogen, cyanides, phosgene and hydrogen chloride.
Products	
Special Protective Equipment for fire fighters	Breathable air apparatus should be worn when fighting a fire in which diuron is involved.
Specific Hazards	Considered low risk due to water content, however upon evaporation of water the product is combustible.
Emergency Action in case of Fire	If exposed to fire, keep container cool by spraying with water.
Other Information	STOP FIRE WATER FROM ENTERING DRAINS OR WATER BODIES.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal	Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite). Collect spilled material and waste in sealable open-top type containers for disposal.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8. If product has dried out and the possibility of dust generation exists, wear a suitable respirator.
Clean-up Methods - Large Spillages	If large liquid spills occur, attempt to recover as much spilt material from sumps and bunded areas, as possible, before absorbing remaining material into vermiculite or other absorbent.

7. HANDLING AND STORAGE

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. Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.
Other Information	Always read the label and any attached leaflet before use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards	<u>Name</u>	STEL		TWA		<u>Footnote</u>
		<u>mg/m3</u>	<u>ppm</u>	<u>mg/m3</u>	<u>ppm</u>	
	Diuron			10		
	Ethylene glycol	120		60		
Engineering Controls	Handle in well ventilated areas, generally natural ventilation is adequate.					
Personal Protective Equipment	When opening the container, preparing spray and using the prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and goggles.					
Hygiene Measures	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.					

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	Liquid
Appearance	Pale green liquid
Boiling Point	~100°C (for water)
Solubility in Water	Disperses in water.
Specific Gravity	1.160

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Vapour Pressure	1.1 x 10 ⁻³ mPa @ 25°C for diuron
Volatile Component	~40% (water)
Octanol/Water Partition Coefficient	Kow Log P is 2.85 for diuron
Flammability	Non combustible material.

Other Information

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Hazardous Reactions	Keep away from strong oxidising agents.
Hazardous Polymerization	Hazardous polymerisation is not possible.

11. TOXICOLOGICAL INFORMATION

Toxicology Information	No harmful effects are expected if the precautions on the label and this MSDS are followed.
Inhalation	May cause irritation to the respiratory tract.
Ingestion	Low toxicity. However, swallowing large amounts of concentrate may cause nausea and vomiting.
Skin	The concentrated product may cause slight irritation on contact.
Eye	May irritate the eyes.
Chronic Effects	Evidence from animal studies indicate that repeated or prolonged exposure to diuron can result in blood disorders.
Reproductive Toxicity	No such effects have been observed in the absence of maternal toxicity.
Mutagenicity	The weight of evidence indicates that diuron does not present a mutagenic risk.
Carcinogenicity	Diuron has been assessed in animals and some data exists that diuron is a substance which causes some concern for humans owing to possible carcinogenic effects from long term exposure, but in respect of which the available information is not adequate for making a satisfactory assessment.
Acute Toxicity - Oral	LD50 (rat) >3000 mg/kg for diuron
Acute Toxicity - Dermal	LD50 (rabbit) >2000 mg/kg for diuron
Acute Toxicity - Inhalation	LC50 (rat) (4hr) >5 mg/l for diuron
Eye Irritation	Mild eye irritant.
Skin Irritation	Mild skin irritant.
Skin Sensitisation	Product is not a skin sensitiser.
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: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', June 2014).

12. ECOLOGICAL INFORMATION

Persistence / Degradability	Average field half life of diuron is 90 - 180 days.
Known Harmful Effects on the Environment	The product is a marine pollutant for sea transport.
Environ. Protection	Spray drift should be avoided, read the label for more information. Do NOT apply, drain or flush equipment on or near desirable trees or other plants, or on an area where their roots extend, or in locations where the

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Acute Toxicity - Fish	chemical may be washed or moved into contact with their roots. The following is data for the active ingredient, diuron. LC50 (96hr) for rainbow trout is 5.6 mg/l. LC50 (96hr) for bluegill sunfish is 5.9 mg/l.
Acute Toxicity - Daphnia	LC50 (48hr) for daphnia is 12 mg/l for diuron.
Acute Toxicity - Algae	EC50 (120hr) for Selanastrum capricornutum is 0.022 mg/l.
Acute Toxicity - Other Organisms	Not toxic to bees. Not toxic to birds.

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	Triple or preferably pressure rinse containers before disposal. Add rinsings to the spray tank. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in 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. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program.

14. TRANSPORT INFORMATION

Transport Information	Not classified as Dangerous Goods, according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
Storage and Transport	Exempt from classification as a Dangerous Good in packs less than 3,000 kg or L as per ADG7, SP no. AU01. For bulk shipments as Class 9, use UN 3082, HazChem code 2Z.
UN Number (Sea Transport)	3082
IMO Class/Packing Group	Class 9
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains diuron)

15. REGULATORY INFORMATION

Poisons Schedule	S5
Packaging & Labelling	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category	Harmful
Other Information	This product is registered with the Australian Pesticides and Veterinary Medicines Authority (APVMA). APVMA product number: 31702.

16. OTHER INFORMATION

Date of preparation or last revision of MSDS	Revised 17/11/2014. This MSDS replaces document dated November 2009.
Contact Person/Point	Normal Hours: Mrs Kathleen Marsh Phone: +61 3 9282 1000 After Hours: Shift Supervisor Phone: 1800 033 498



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Revisions	The MSDS was reviewed. Minor changes were made to the information.
Highlighted	5 year review. ...End Of MSDS...

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