



# Material Safety Data Sheet

Infosafe No. 3NUC1 Issue Date : August 2006 ISSUED by NUFARM

Product Name : **DRIVE® Herbicide**

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name** DRIVE® Herbicide  
**Product Code** 0524  
**Product Type** Group I Herbicide  
**Company Name** NUFARM AUSTRALIA LIMITED. (ABN 80 004 377 780)  
**Address** 103-105 Pipe Road Laverton North  
Victoria 3026 Australia  
**Emergency Tel.** 24hr 1800 033 498  
**Telephone/Fax Number** Tel: (03) 9282-1000 Fax: (03) 9282-1001  
**Recommended Use** For the post-emergence control of summer grass and white clover and the suppression of Kikuyu in turf as specified in the Directions for Use table on the label.  
**Other Information** This MSDS 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** 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)** R36/38 Irritating to eyes and skin.  
**Safety Phrase(s)** S13 Keep away from food, drink and animal feeding stuffs.  
S2 Keep out of reach of children.  
S37/39 Wear suitable gloves and eye/face protection.  
**Other Information** Poisons Schedule S5

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Characterization** Solid

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Other ingredients (considered non-hazardous)		Balance
	Quinclorac	84087-01-4	750g/Kg

## 4. FIRST AID MEASURES

**Inhalation** Remove affected person to fresh air until recovered.  
If symptoms develop or persist, seek medical advice.  
**Ingestion** Rinse mouth and then drink plenty of water.  
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** If in eyes, hold eyelids open and wash with copious amounts of water for at least 15 minutes.  
Seek medical advice.  
**First Aid Facilities** If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia).  
**Advice to Doctor** Treat symptomatically.



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## 5. FIRE FIGHTING MEASURES

**Suitable Extinguishing Media** Water fog, foam, carbon dioxide or dry chemical.

**Media**

**Hazards from Combustion Products** May emit toxic fumes of hydrogen chloride or phosgene if involved in fires or exposed to extreme heat.

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

**Hazchem Code** None Allocated

**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.

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

**Environmental Precautions** Use earthen bunds or absorbent bunding to prevent spreading of spillage.

Prevent product or washings from entering drains, waterways or sewers.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** Avoid generating dusts while handling the product and mixing.

**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.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** No exposure standards have been established for this product by Worksafe Australia, however, the TWA exposure standard for dusts not otherwise specified is 10 mg/m<sup>3</sup>.

**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.

**Requirements Concerning Special Training** NSW regulations require that people who use pesticides in their job or business must have training in the application of the materials. By 1st September, 2005 all users must have received such training.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form** Solid

**Appearance** Light tan granules.

**Solubility in Water** Disperses in water.

**Vapour Pressure** <0.01 mPa @ 20°C (quinclorac)

**Octanol/Water Partition Coefficient** Kow Log P is -1.15 (quinclorac, pH7)

**Flammability** Non combustible material.

**Other Information** pKa is 4.34 (quinclorac)

## 10. STABILITY AND REACTIVITY

**Chemical Stability** Stable under normal conditions.



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**Hazardous Polymerization** Hazardous polymerisation is not possible.

## 11. TOXICOLOGICAL INFORMATION

**Inhalation** The components of the product are of low volatility and no adverse effects are expected from handling the concentrate.  
When applying the product as a spray avoid breathing in spray mist.

**Ingestion** Low toxicity.  
However, swallowing large amounts of concentrate may cause nausea and vomiting.

**Skin** May irritate the skin.

**Eye** The concentrate will cause irritation of the eyes.

**Chronic Effects** Based on available data, repeated exposures are not anticipated to cause additional significant adverse effects.

**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

**Eye Irritation** The product is an eye irritant.

**Skin Irritation** The product is a skin irritant.

**Skin Sensitisation** Product is not a skin sensitiser.

**Other Information** The Australian Acceptable Daily Intake (ADI) for quinclorac for a human is 0.3 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 35 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, 'ADI List', TGA, September 2005).

## 12. ECOLOGICAL INFORMATION

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

**Environ. Protection** Spray drift should be avoided, read the label for more information.

**Acute Toxicity - Fish** The following is data for the active ingredient, quinclorac.  
LC50 (96 hr) for rainbow trout and bluegill sunfish is >100 mg/l.

**Acute Toxicity - Daphnia** LC50 (48 hr) for daphnia is 113 mg/l for quinclorac.

**Acute Toxicity - Algae** EC50 > 100 mg/l

**Acute Toxicity - Other Organisms** Birds: Not toxic to birds. LD50 for mallard duck is >2000 mg/kg  
Not toxic to bees.

## 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 (ChemCollect).

**Container Disposal** Do not use this container for any other purpose.  
Thoroughly wash out the inner and add washings to the spray tank. Dispose of washed inner and cardboard box in landfill.  
If on-site container disposal is necessary, triple rinse empty container with water, add rinsate to the spray tank. Puncture top, sides and bottom, crush and bury in an approved landfill or bury with at least 500 mm of soil cover away from pasture and crop areas, water supplies and houses.  
Empty containers and product should not be burnt.

## 14. TRANSPORT INFORMATION

**U.N. Number** None Allocated  
**DG Class** None Allocated



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**Hazchem Code** None Allocated  
**Packing Group** None Allocated  
**Storage and Transport** Considered non dangerous for transport by the Australian Code for the Transport of Dangerous Goods by Road and Rail.

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## 15. REGULATORY INFORMATION

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**Poisons Schedule** S5  
**Packaging & Labelling** CAUTION  
KEEP OUT OF REACH OF CHILDREN  
READ SAFETY DIRECTIONS BEFORE OPENING OR USING  
**Hazard Category** Irritant  
**AICS (Australia)** All of the components in this product are listed on the Australian Inventory of Chemical Substances.

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## 16. OTHER INFORMATION

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**Contact Person/Point** Normal Hours: Mr Volker Maier Phone: (03) 9282 1000  
After Hours: Shift Supervisor Phone: 1800 033 498  
**Revisions Highlighted** First Issue  
**Other Information** © Registered trademark of BASF.  
...End Of MSDS...