



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

Ingredients	Name	CAS	Proportion
	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/m³.

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.



Material Safety Data Sheet

Page 3 of 4

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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



Material Safety Data Sheet

Page 4 of 4

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

Product Name : **DRIVE® Herbicide**

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.

15. REGULATORY INFORMATION

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.

16. OTHER INFORMATION

Contact Person/Point Normal Hours: Mr Volker Maier Phone: (03) 9282 1000
After Hours: Shift Supervisor Phone: 1800 033 498
Revisions Highlighted First Issue
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