



Material Safety Data Sheet

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Infosafe No. 3NU15 Issue Date : May 2007 ISSUED by NUFARM

Product Name : NUGRASS Selective Herbicide

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name NUGRASS Selective Herbicide
Product Code 0639
Product Type Group A 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 post-emergent control of annual rye grass, common barb grass and wild oats in wheat, linseed, peas and other crops and for the control of crowsfoot grass in turf as listed 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) R22 Harmful if swallowed.
R43 May cause sensitization by skin contact.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness and cracking.
R67 Vapours may cause drowsiness and dizziness
Safety Phrase(s) S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
Other Information Poisons Schedule S6

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

Ingredients	Name	CAS	Proportion
	Liquid Hydrocarbon	64742-94-5	534 g/L
	Diclofop-methyl	51338-27-3	375 g/L
	Other ingredients (considered non-hazardous)		0-10 %

4. FIRST AID MEASURES

Inhalation Remove affected person to fresh air until recovered.
If symptoms develop or persist, 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.
The above first aid instructions are mandated by the Commonwealth Department of Health and Ageing via the National Drugs and Poisons Schedule. These instructions are suitable for ingestion of spray solution and small amounts of



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concentrate; however, if SUBSTANTIAL AMOUNTS of the concentrate have been swallowed (more than about 20ml for an adult person) AND if medical assistance is more than 30 minutes away, the induction of vomiting should be CONSIDERED, preferably based on MEDICAL ADVICE if a physician can be contacted by phone. All care must be taken to prevent vomit from being inhaled. Do not give anything by mouth to a semi-conscious or unconscious person.

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

Eye 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.
If vomiting occurs, solvent present may cause pulmonary pneumonitis. Gastric lavage with medicinal charcoal in water is recommended.
Induce diuresis and monitor electrolyte and fluid balance.
Monitor kidney and liver function, red blood cell count, blood lipids and cholesterol for hypolipidaemia and lowered cholesterol (low density lipoproteins).

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 will emit oxides of carbon, oxides of nitrogen and possibly toxic fumes of hydrogen chloride and phosgene.

Special Protective Equipment for fire fighters Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

Hazchem Code None Allocated

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.

Clean-up Methods - Large Spillages Place damaged containers in recovery bins (if available) and return to manufacturer.
If large liquid spills occur, attempt to recover as much spilt material from sumps and bunded areas 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 The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m³; 17ppm TWA, as total hydrocarbon.

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.



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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 Liquid

Appearance Clear brown liquid

Odour Typical solvent odour.

Solubility in Water Forms an emulsion in water.

Specific Gravity 1.090 - 1.098

pH Value 4.5 - 6.5 (1% aqueous emulsion)

Vapour Pressure 0.0017 mPa @ 20°C (for solvent), 0.034 mPa @ 20°C for diclofop-methyl.

Volatile Component 45%

Octanol/Water Partition Coefficient Kow Log P is 2.81 (pH5); 1.61 (pH7)

Flash Point 63.5°C

Flammability Combustible liquid C1.

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 Breathing in high concentrations of vapour can produce central nervous system depression, which can lead to loss of coordination, impaired judgement and if exposure is prolonged, unconsciousness.
Breathing in high concentrations of vapours or aerosols of this material may cause nausea, headaches and irritation of the nose, throat and respiratory tract.

Ingestion Ingestion of the concentrate in relatively large amounts can result in headache, nausea, lethargy, motor weakness and incoordination.
If aspirated into the lung, e.g. from vomiting, the presence of the solvent may result in chemical pneumonitis or other lung damage.

Skin May irritate the skin.
Prolonged or repeated exposure may cause skin sensitisation.
Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis.

Eye May irritate the eyes.

Reproductive Toxicity Data indicates no reproductive effects.

Mutagenicity Data indicates no mutagenic effects.

Carcinogenicity An incidence of liver tumours was noted in long-term studies with diclofop-methyl in rodents.
As the mechanism involved is not relevant to humans, and the dose levels were very high, the potential carcinogenic risk to humans is considered negligible.

Acute Toxicity - Oral LD50 (rat) 481 - 693 mg/kg for diclofop-methyl

Acute Toxicity - Dermal LD50 (rat) >5000 mg/kg for diclofop-methyl



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Acute Toxicity - Inhalation LC50 (rat) (4hr) >1.36 mg/l for diclofop-methyl
Eye Irritation Mild eye irritant.
Skin Irritation Mild skin irritant.
Skin Sensitisation Prolonged and repeated skin contact may result in skin sensitisation.
Other Information The Australian Acceptable Daily Intake (ADI) for diclofop-methyl for a human is 0.002 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.25 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 2006).

12. ECOLOGICAL INFORMATION

Persistence / Degradability Half life (DT50) in soil is typically 60 days.
Mobility Low probability of mobility in soil.
Known Harmful Effects on the Environment The product is a marine pollutant for sea transport.
Other Precautions Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Acute Toxicity - Fish The following is data for the active ingredient, diclofop-methyl. Toxic to fish. LC50 (96hr) for rainbow trout is 0.23 mg/l.
Acute Toxicity - Daphnia EC50 (48hr) is 0.23 mg/l.
Acute Toxicity - Algae EC50 (72hr) for Scenedesmus subspicatus 1.5 mg/l.
EC50 (120hr) for Selenastrum capricornutum 0.53 mg/l.
Acute Toxicity - Other Organisms Birds: Not toxic to birds. LD50 for japanese quail is >10,000 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 (ChemClear®).
Container Disposal Do not use this container for any other purpose. Triple rinse containers, add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. 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. 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. Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.

14. TRANSPORT INFORMATION

U.N. Number None Allocated
DG Class None Allocated



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Product Name : **NUGRASS Selective 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.
UN Number (Sea Transport)	3082
IMO Class/Packing Group	Class 9; Packing Group III
IMO Marine Pollutant	Marine Pollutant
IMO Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Diclofop-methyl)

15. REGULATORY INFORMATION

Poisons Schedule	S6
Packaging & Labelling	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Hazard Category	Harmful,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: +61 3 9282 1000
	After Hours: Shift Supervisor	Phone: 1800 033 498
Revisions Highlighted	The MSDS was reviewed. Various changes were made to the information.	
	...End Of MSDS...	