



Material Safety Data Sheet

Page: 1 of 5

Infosafe No. NUODK Issue Date : July 2004 ISSUED by NUFARM

Product Name : **RIFLE 330 Herbicide**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name RIFLE 330 Herbicide
Product Code 0798
Product Use For the control of annual ryegrass and wireweed in wheat, barley and peas and annual grasses and certain broadleaf weeds in various crops as shown in the Directions For Use Table.
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/Telex Number Tel: (03) 9282-1000 Fax: (03) 9282-1001
Product Type Group D Herbicide
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. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

Ingredients	Name	CAS	Proportion
	Hydrocarbon Liquid	64742-94-5	594 g/L
	Pendimethalin technical	40487-42-1	330 g/L
	Surfactants		5-10 %

3. HAZARDS IDENTIFICATION

Harmful if swallowed.
Harmful: may cause lung damage if swallowed.

Other Information Poisons Schedule 5

4. FIRST AID MEASURES

Inhalation Remove to fresh air, apply artificial respiration if necessary.
Ingestion Give water or milk to drink. DO NOT induce vomiting.
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.
First Aid Facilities If poisoning occurs, contact a doctor or Poisons Information Centre on 13 11 26 (Australia).
Advice to Doctor Treat symptomatically.
If vomiting occurs, solvent present may cause pulmonary pneumonitis.

5. FIRE FIGHTING MEASURES

Extinguishing Media Water fog, foam, carbon dioxide or dry chemical.
Hazardous Combustion Products If involved in a fire, it will emit oxides of carbon, oxides of nitrogen and possibly cyanides.
Emergency Action in case of Fire If exposed to fire, keep container cool by spraying with water.
If possible, remove other containers from the area of fire.
Protective Equipment Breathable air apparatus may have to be worn in confined spaces.
Other Information Prevent fire water from entering drains or water bodies.

Infosafe No.	NUODK	Issue Date : July 2004	ISSUED by NUFARM
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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.

7. HANDLING AND STORAGE

Handling For personal protective equipment (PPE) and hygiene advice, refer Section 8.
Pendimethalin is coloured and will strongly stain skin and clothing. If skin has been exposed to the product, thorough washing with soap and water will remove any excess product. The colour on the skin is not deep and will naturally disappear over a few days.

Storage Store in the closed, original container in a dry, cool well ventilated area out of direct sunlight.
Do not store below 5 °C. Extended storage below 5°C can result in the formation of crystals on the bottom of the container. If crystallisation does occur, store the container on its side at room temperature and rock occasionally until crystals re-dissolve.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

Exposure Limits No exposure standard has been established for this product.
The manufacturer of the solvent has recommended an occupational exposure limit of 100 mg/m³; 17ppm TWA, as total hydrocarbon.

Respiratory Protection Do not inhale spray mist.

Personal Protective Equipment When opening the container, preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat, nitrile or elbow-length PVC gloves and face shield or goggles.

Eng. Controls Handle in well ventilated areas, generally natural ventilation is adequate.

Hygiene Measures Wash concentrate from skin and eyes immediately.
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

Appearance Black clear liquid with yellow-orange tinge

Odour Solvent odour

Melting Point Some crystallisation occurs between 0 and -7°C

Solubility in Water Forms an emulsion in water.
0.54mg/l pH4 ; 0.33 mg/l pH7
The product will emulsify in water forming a yellow, milky emulsion.

Boiling Point 183-210°C (for solvent)

Specific Gravity (H₂O=1) 0.988

Vapour Pressure Pendimethalin 4.0mPa @ 25°C; Solvent 0.1kPa @20°C

Volatile Component 50-60%

Partition co-efficient, n-octanol/water Kow Log P is 5.2 (pH 7.0)

Surface Tension 32.5 CP

Flash Point 65°C

Flammability Combustible liquid C1.

Ignition Temperature >450°C (solvent)



Material Safety Data Sheet

Page: 3 of 5

Infosafe No. NUODK Issue Date : July 2004 ISSUED by NUFARM

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Flammable Limits 0.6 vol% for solvent
LEL

Flammable Limits 0.7 vol% for solvent
UEL

Kinematic Viscosity 3 x 10⁻⁶ m²/s

10. STABILITY AND REACTIVITY

Hazardous Polymerization Hazardous polymerisation is not possible.

Hazardous Reaction Keep away from strong oxidising agents, may react violently.

Conditions to Avoid Prolonged reaction with water can cause slow decomposition and the formation of acid which may attack drums.
If a part open drum is to be stored, ensure that no water has been added to the drum.
Technical pendimethalin (before formulation) has exhibited exothermic decomposition at around 200°C. Avoid heating the product to high temperatures.

11. TOXICOLOGICAL INFORMATION

Inhalation High vapour concentrations of the solvent while handling the concentrate are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, can be anaesthetic and may have other central nervous system effects.
When applying the product as a spray avoid breathing in spray mists.

Ingestion The concentrate is of low toxicity if swallowed.
If aspirated into the lung, e.g. from vomiting, the presence of solvent may result in chemical pneumonitis or other lung damage.

Skin The concentrate is not considered a serious toxic hazard.
Prolonged contact with the concentrate can cause defatting of the skin and may result in dermatitis.

Eye The concentrate may cause irritation after short contact with the eyes, but permanent damage is not anticipated.

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

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

Mutagenicity Data indicates no mutagenic effects.

Carcinogenicity A marked depression in body weight and a statistically significant increase in benign thyroid tumors (follicular adenomas) were observed at the highest dose level (5000ppm) in a lifetime (24 month) rat study, not considered to be relevant to humans. (1)

Acute Toxicity - Oral LD50 (rat) >5000 mg/kg for pendimethalin

Acute Toxicity - Dermal LD50 (rat) >2000 mg/kg for pendimethalin

Acute Toxicity - Inhalation LC50 (rat) (4hr) >320 mg/l

Eye Irritation Not an eye irritant.

Skin Irritation Not a skin irritant.

Skin Sensitisation Prolonged and repeated skin contact may result in skin sensitisation.

Other Information The Australian Acceptable Daily Intake (ADI) for pendimethalin for a human is 0.1 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 12 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, August 2003).



Material Safety Data Sheet

Page: 4 of 5

Infosafe No. NUODK Issue Date : July 2004 ISSUED by NUFARM

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12. ECOLOGICAL INFORMATION

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.
Do not spray in high winds.

Environ. Protection Spray drift can cause damage.

Acute Toxicity - Fish Toxic to fish. LC50 (96hr) for rainbow trout is 0.14 mg/l.
LC50 (96 hr) for bluegill sunfish is 0.2 mg/l.
LC50 (96 hr) for channel catfish is 0.42 mg/l.

Acute Toxicity - Other Organisms Dietary LC50 (8d) for bobwhite quail is 4187 mg/kg
LD50 for mallard duck is 10388 mg/kg
Bees: Not toxic to bees. LD50 >50 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 (ChemCollect).

Container Disposal 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.
Returnable containers: empty contents fully into application equipment. Replace cap, close all valves and return to the point of supply for refill or storage.
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.

14. TRANSPORT INFORMATION

U.N. Number None Allocated
Proper Shipping Name None Allocated
DG Class None Allocated
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 Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(contains Pendimethalin)

15. REGULATORY INFORMATION

Risk Phrase R22 Harmful if swallowed.
R65 Harmful: may cause lung damage if swallowed.



Material Safety Data Sheet

Page: 5 of 5

Infosafe No. NUODK Issue Date : July 2004 ISSUED by NUFARM

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Safety Phrase S13 Keep away from food, drink and animal feeding stuffs.
S2 Keep out of reach of children.
S25 Avoid contact with eyes.
S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Poisons Schedule S5

Hazard Category Harmful

Packaging & Labelling CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

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

References (1) European Union review report for the active substance Pendimethalin 7477/V1/98 final, dated 13th January 2003.

Revisions Highlighted The MSDS was reviewed. Minor changes were made to the information. See also Section 11, Carcinogenicity and References in Section 16.
...End Of MSDS...