



# Material Safety Data Sheet

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Infosafe No. NUOHN Issue Date : June 2004 ISSUED by NUFARM

Product Name : **Roundup**

Classified as hazardous according to criteria of NOHSC

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

**Product Name** Roundup  
**Product Code** 0539  
**Product Use** Water soluble herbicide for non selective control of many annual and perennial weeds in certain situations.  
**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 M 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

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>
	Glyphosate (present as the isopropylamine salt)	1071-83-6	360 g/l
	Surfactant		~10 %w/v
	Water		Balance

## 3. HAZARDS IDENTIFICATION

Irritating to eyes.  
**Other Information** Poisons Schedule 5

## 4. FIRST AID MEASURES

**Inhalation** Remove affected person to fresh air until recovered.  
**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.  
Do not give anything by mouth to a semi-conscious or unconscious person.  
Give a glass of water.  
**Skin** Wash affected areas thoroughly with soap and water.  
If irritation persists, seek medical advice.  
**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.

## 5. FIRE FIGHTING MEASURES

**Extinguishing Media** If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.  
Water, foam, carbon dioxide or dry chemical.



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**Hazardous** Keep upwind.  
**Combustion Products** This product, or spray solutions of this product, react with galvanised steel or unlined steel (except stainless steel) containers and tanks, to produce hydrogen gas which may form a highly flammable or explosive gas mixture.  
If involved in a major fire, could evolve oxides of nitrogen or phosphorus.  
**Protective Equipment** Breathable air apparatus may have to be worn if material is involved in fires especially in confined spaces.

## 6. ACCIDENTAL RELEASE MEASURES

**Spills & Disposal** Contain spill and absorb with clay, sand, soil or proprietary absorbent (such as vermiculite).  
Collect in sealed open top containers for disposal.  
Final clean-up with degreasing agent or detergent is advised.  
**Environmental Precautions** Prevent from entering drains, waterways or sewers.

## 7. HANDLING AND STORAGE

**Handling** For personal protective equipment (PPE) and hygiene advice, refer Section 8.  
**Storage** Store in the closed, original container in a dry, well ventilated area out of direct sunlight.  
Keep container tightly sealed and do not store with seed, fertilisers or foodstuffs.

## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

**Exposure Limits** No exposure standard has been established for this product.  
**Personal Protective Equipment** When preparing product for use wear elbow-length PVC gloves and face shield or goggles.  
When using controlled droplet applicator, wear protective waterproof clothing and impervious footwear.  
**Eng. Controls** No special ventilation required.  
**Hygiene Measures** After each day's use, wash contaminated clothing and safety equipment.  
After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance** Clear amber viscous liquid  
**Odour** Faint amine odour  
**Melting Point** N/A  
**Solubility in Water** Soluble in water.  
**Boiling Point** >100°C  
**Specific Gravity (H<sub>2</sub>O=1)** 1.17  
**Vapour Pressure** N/A  
**Vapour Density (Air=1)** N/A  
**Volatile Component** N/A  
**Flash Point** None  
**Flammability** Non combustible material.  
**Ignition Temperature** N/A  
**Flammable Limits** N/A  
**LEL**  
**Explosion Properties** N/A



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## 10. STABILITY AND REACTIVITY

<b>Hazardous Polymerization</b>	Hazardous polymerisation is not possible.
<b>Materials to Avoid</b>	Corrosive to mild steel, galvanised steel and zinc. Non corrosive to stainless steel, polyethylene and plastics. Do not mix, store or apply the product or spray solutions of the product in galvanised steel or unlined steel (except stainless steel) containers or spray tanks.
<b>Hazardous Reaction</b>	Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime. Such contact may release isopropylamine vapour with a strong fish like odour, which is an irritant to eyes. Isopropylamine is moderately toxic, LD50 (oral, rat) is 820 mg/kg and a TLV of 5 ppm (TWA) has been set.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicology Information</b>	No harmful effects are expected if the precautions on the label and this MSDS are followed.
<b>Inhalation</b>	When applying the product as a spray avoid breathing in spray mists. May cause irritation to mucous membranes and respiratory tract.
<b>Ingestion</b>	The concentrate is of low toxicity if swallowed. Amounts swallowed incidental to normal handling procedures and use are not expected to cause injury. Possible symptoms of exposure include: nausea, vomiting and gastrointestinal discomfort and diarrhoea. Ingestion of a large quantity of the undiluted product may result in hypotension and pulmonary oedema.
<b>Skin</b>	The concentrated product may cause slight irritation on contact. Prolonged contact is likely to result in irritation.
<b>Eye</b>	The concentrate may cause irritation of the eyes. Prolonged contact with the concentrate may cause damage to the eye.
<b>Chronic Effects</b>	No information available, no chronic effects expected.
<b>Acute Toxicity - Oral</b>	LD50 (rat) >5,000 mg/kg for a similar formulation
<b>Acute Toxicity - Dermal</b>	LD50 (rabbit) >5,000 mg/kg for a similar formulation
<b>Eye Irritation</b>	Slight irritant
<b>Skin Irritation</b>	Slight irritant.
<b>Other Information</b>	The Australian Acceptable Daily Intake (ADI) for glyphosate for a human is 0.3 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 30 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).

## 12. ECOLOGICAL INFORMATION

<b>Known Harmful Effects on the Environment</b>	Harmful to fish and other aquatic organisms (mainly due to the surfactant).
<b>Other Precautions</b>	Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product.
<b>Environ. Protection</b>	Glyphosate is a non-selective contact herbicide. Spray drift can cause damage.



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**Persistence / Degradability** Adsorption studies indicate that glyphosate has very low mobility.  
Average field half life of glyphosate is 47 days.

**Acute Toxicity - Fish** The following is data for a similar product.  
LC50 (96 hr) for bluegill sunfish is 5.8 - 14 mg/l.  
LC50 (96 hr) for rainbow trout is 8.2 - 26 mg/l.  
LC50 (96 hr) for fathead minnow is 9.4 mg/l.  
TL50 (96hr) carp is 19.7 ppm

**Acute Toxicity - Other Organisms** The following data is for the active ingredient, glyphosate.  
Birds: Not toxic to birds. LD50 for bobwhite quail is >3850 mg/kg  
Bees: Not toxic to bees. LD50 >100 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** 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.

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.

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.  
Empty containers and product should not be burnt.

## 14. TRANSPORT INFORMATION

It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.

**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.

## 15. REGULATORY INFORMATION

**Risk Phrase** R36 Irritating to eyes.

**Safety Phrase** S25 Avoid contact with eyes.  
S39 Wear eye/face protection.

**Poisons Schedule** S5

**Hazard Category** Irritant

**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.



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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** The MSDS was reviewed. Minor changes were made to the information. The MSDS is now issued in a 16 header format.  
...End Of MSDS...