



Material Safety Data Sheet

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Infosafe No. 3NU3Y Issue Date : July 2004 ISSUED by NUFARM

Product Name : **Glyphosate 360 Herbicide**

Classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

Product Name Glyphosate 360 Herbicide
Product Code 0540
Product Use For the control of annual and perennial weeds in certain situations as per 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 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

Ingredients	Name	CAS	Proportion
	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 (H₂O=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

Hazardous Polymerization	Hazardous polymerisation is not possible.
Materials to Avoid	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.
Hazardous Reaction	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

Toxicology Information	No harmful effects are expected if the precautions on the label and this MSDS are followed.
Inhalation	When applying the product as a spray avoid breathing in spray mists. May cause irritation to mucous membranes and respiratory tract.
Ingestion	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.
Skin	The concentrated product may cause slight irritation on contact. Prolonged contact is likely to result in irritation.
Eye	The concentrate may cause irritation of the eyes. Prolonged contact with the concentrate may cause damage to the eye.
Chronic Effects	No information available, no chronic effects expected.
Acute Toxicity - Oral	LD50 (rat) >5,000 mg/kg for a similar formulation
Acute Toxicity - Dermal	LD50 (rabbit) >5,000 mg/kg for a similar formulation
Eye Irritation	Slight irritant
Skin Irritation	Slight irritant.
Other Information	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

Known Harmful Effects on the Environment	Harmful to fish and other aquatic organisms (mainly due to the surfactant).
Other Precautions	Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product.
Environ. Protection	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

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...