



Material Safety Data Sheet

Glyphosate 470 Herbicide

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product trade name: 4Farmers Glyphosate 470 Herbicide
Other names:
Recommended use: Non-selective control of most annual and perennial plants.
Company name & address: 4Farmers Pty. Ltd.
A.C.N 067 443 485
70 McDowell St, Welshpool, Western Australia, 6106.
Ph: (08) 9356 3445 Fax (08) 9356 3447

2. HAZARDS IDENTIFICATION

Hazard classification: Non-hazardous substance. Non-dangerous goods.
Risk phrases: R22 Harmful if swallowed.
Safety phrases: S20/21 When using do not eat or drink/smoke
S24/25 Avoid contact with skin/eyes
S29/35 Do not empty into drains/Dispose of material and container in a safe way
SUSDP Classification: S5
ADG Classification: Not a dangerous good
UN Number: None allocated

3. COMPOSITION

Substance	CAS Number	% content
Glyphosate isopropylammonium	38641-94-0	63.5 (to give 47% glyphosate)
Surfactant		15
Water		To 100%

4. FIRST AID MEASURES

Skin contact: Remove contaminated clothing. Wash contaminated skin with soapy water. If skin irritation develops, get medical attention. Wash clothing thoroughly before re-use.
Eye contact: Rinse eye(s) with clean running water for 15 mins. Get medical attention.
Ingestion: Rinse mouth. Give water to drink if patient is conscious. DO NOT induce vomiting. If vomiting occurs ensure patient can breathe, then give water to drink. Get medical attention.
Advice to doctor: No specific antidote is known. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Not applicable. Use media suitable to other flammable compounds in fire.
Special hazards in fire: Product is not flammable. Combustion may release carbon dioxide, nitrogen oxides, and/or phosphorous compounds.
Required special protective equipment for fire-fighters: Wear self contained breathing apparatus if in enclosed space.
Hazchem code: N/A
Note: this product will react with galvanised steel and/or aluminium to release hydrogen gas, which is highly flammable, and may be explosive with air.

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures: Wear protective equipment to prevent skin and eyes being affected.
Evacuate unprotected and unnecessary personnel from area of spill.
If material is leaking from a container, stop the leak only if this can be done safely.
Prevent spillage entering drains or watercourse.
Methods for containment & cleanup: Vermiculite, Sand, Soil is a suitable absorbent, especially soils high in clay.
Soil can be used to form bunds to contain spillage.
Contaminated soil should be collected for disposal at a suitable landfill.



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Contaminated area and tools should be washed down with hypochlorite bleach.
Personal protective equipment and clothing should be washed with soapy water.

7. HANDLING AND STORAGE

Handling: Keep away from food, drink, and animal feedstuff.
KEEP OUT OF REACH OF CHILDREN.
Wear suitable Personal protective equipment when handling and spraying.

Storage: Store in the original container in a dry, cool, ventilated, LOCKED area.
DO NOT store in prolonged sunlight.
DO NOT store with food, seed, or animal feedstuff.

8. EXPOSURE CONTROLS

National exposure standards: None established.

Engineering measures: No special ventilation is needed. The product is not volatile.

Personal protection equipment:

- Eye/face protection: Goggles or glasses to AS 1366, AS/NZS1337
- Hand/skin protection: Overalls, PVC gloves and apron, face shield
- Respiratory protection: Should not be necessary under normal conditions. If spray mist may be encountered, a particulate filter to AS/NZS 1715 should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Blue-green viscous liquid.

Odour: None.

pH: ≈ 4

Vapour pressure: Very low. Water carrier will have a VP.

Vapour density: Will be that of water carrier.

Boiling point/range: Carrier will boil above 110 °C. Glyphosate will decompose above 200 °C.

Melting/freezing point: $\ll 0$ °C.

Solubility: Fully miscible with water.

Specific gravity - density: ≈ 1.33

Flashpoint: Not flammable.

Explosive limits (air): N/A

Ignition temperature: N/A

10. STABILITY AND REACTIVITY

Chemical stability: Stable over a wide range of environmental conditions.

Conditions to avoid: Keep away from direct sunlight and high/low temperatures.

Materials to avoid: Do not store in or with galvanised, aluminium, or plain steel containers.

Hazardous decomposition products:

Hazardous reactions: None known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: LD₅₀ for glyphosate (rat) is > 5000 mg/kg

Chronic toxicity: None known.

Possible routes of exposure: Inhalation of spray mist is the most likely cause of exposure.

Range of effects. Excessive exposure may affect human health as follows:

- Skin contact: May cause slight irritation.
- Eye contact: Likely to cause irritation.
- Inhalation/ingestion: Low toxicity. Likely to cause nausea.

Dose/conc./conditions likely to cause injury: In excess of the NOEL of 30 mg/kg/day.

Delayed effects if any: None expected.

Relevant negative data: Not known to be carcinogenic, mutagenic, or teratogenic.



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12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Aquatic organisms:	Surfactant in formulation is toxic to fish, crustaceans, amphibians.
Flora:	Toxic to most plants. Avoid spray drift onto non-target vegetation.
Fauna:	Generally safe at normal use rates.
Soil organisms:	Little effect. Is strongly absorbed by clay particles.
Bees:	Not toxic.
Long term:	None.
Ozone effects:	None recorded.
Persistence/degradation: temperature).	Half life of weeks rather than months (depends markedly on soil type, moisture,
Mobility:	Very Little.
Bioaccumulative potential:	Unknown but probably low.

13. DISPOSAL CONSIDERATIONS

Product:	Whenever possible, product should be used for its intended purpose, even if reclaimed from spillage (reclaimed product must be uncontaminated).
Containers:	Whenever possible, follow directions given on container. If not available, triple or pressure rinse plastic or metal containers before disposal. Recycle containers if possible (replace cap and return clean containers to recycler or designated collection point). Treat rinsings as for product above. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm 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.
Sewage:	Do not dispose of product or rinsings into sewage systems or septic tanks.

14. TRANSPORT INFORMATION

Not a dangerous good, so has no UN Number, UN proper shipping name, ADG Class, or ADG Packing Group.	
Special precautions:	Do not store with foodstuffs.
Hazchem code:	Irritant.
4Farmers does not anticipate that this product will be shipped by air or sea, nor be exported. Extra precautions may apply if such transport is undertaken.	

15. REGULATORY INFORMATION

AICS: All of the significant ingredients in this formulation are to be found in the public AICS Database. This product is an Agricultural Chemical registered by the Agricultural Pesticides and Veterinary Medicines Authority.

16. OTHER INFORMATION

This MSDS prepared February 2008.