



Material Safety Data Sheet

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product trade name: 4Farmers Diuron 900 DF Herbicide
Other names:
Recommended use: Agricultural Herbicide.
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
643 Murray Street, West Perth, Western Australia, 6005
Emergency telephone number: Australian Centre for Occupational Health and Safety
1800 638 556 (24 hours)

2. HAZARDS IDENTIFICATION

Hazard classification: Hazardous substance. Non-dangerous goods.
Risk phrases: R48/22 Danger of serious damage to health by prolonged exposure/Harmful if
swallowed.
Safety phrases: S20/21 When using do not eat or drink/smoke
S22/23 Do not breathe dust/spray
S24/25 Avoid contact with skin/eyes
S29/35 Do not empty into drains/Dispose of material and container in a safe way
S36/37 Wear suitable protective clothing/gloves
SUSDP Classification: Exempt
ADG Classification: Not a dangerous good
UN Number: None allocated

3. COMPOSITION

Substance	CAS Number	% content
Diuron	330-54-1	90
Inert filler, dispersants		10

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.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Water fog or mist, foam, carbon dioxide, dry powder.
Unsuitable extinguishing media: None known.
Special hazards in fire: Granules will burn, releasing carbon oxides, nitrogen oxides, and chlorine compounds.
Required special protective equipment for fire-fighters: Wear self contained breathing apparatus if exposed to combustion products, especially in reduced air situations.
Hazchem code: Xn harmful.

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 spilling from a container, attempt to retain as much as possible in the original



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package.

Prevent spillage entering drains or watercourse.

Methods for containment & cleanup: Scoop up spilled material into suitable bins/containers.

If possible, collect pure material first. This may be re-usable.

Scoop Diuron 900 and contaminated soil next. Take enough soil to ensure all Diuron 900 is included. This material should be disposed of at a suitable landfill.

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: TWA - 10 mg/m³ over 8 hour day, 5 day week, entire working life.
STEL – not established.

Biological limit values:

Engineering measures: Provide assisted air-flow where natural ventilation is not sufficient.

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: White granule.

Odour: Faint.

pH: Neutral.

Vapour pressure: Negligible.

Vapour density: N/A

Boiling point/range: Diuron decomposes at \approx 180-190 °C.

Melting/freezing point: Diuron melts at 158 °C.

Solubility: Diuron – 36 ppm in water.

Specific gravity - density: Bulk density \approx 0.9, Diuron tech 1.48.

Flashpoint: Does not flash.

Explosive limits (air): Not normally applicable.

Ignition temperature: Not available. Probably over 100 °C.

Other:

10. STABILITY AND REACTIVITY

Chemical stability: Stable in water at neutral pH, hydrolysed by acids and alkalis.

Conditions to avoid: High temperatures.

Materials to avoid: Acids, alkalis, oxidising agents.

Hazardous decomposition products: oxides of carbon and nitrogen, chlorine

Hazardous reactions: None.

11. TOXICOLOGICAL INFORMATION

Acute toxicity: Diuron LD₅₀ (oral, rat) 3400 mg/kg, (dermal, rabbit) 20,000 mg/ka

Chronic toxicity: $>$ 6 mg/kg/day for 3 years in rats showed no effects. Other trials showed higher rates causing growth retardation, slight anaemia, liver and/or spleen enlargement.



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Possible routes of exposure: Inhalation of spray mist is the most likely cause of ingestion.
Range of effects. Excessive exposure may affect human health as follows:
Skin contact: May (rarely) result in irritation, possibly by abrasion by solid product, possibly from concentrated slurry, unlikely from diluted spray solution.
Eye contact: May cause irritation, likely by abrasion by solid product, possibly from concentrated slurry, unlikely from diluted spray solution.
Inhalation/ingestion: Ingestion of large amounts may cause nausea, small amounts unlikely to do so. Inhalation of dust (from disintegrated granules) likely to cause respiratory irritation.
Dose/conc./conditions likely to cause injury: Probably 250+ grams for acute effects,
Delayed effects if any:
Relevant negative data: Repeated doses do not produce carcinogenic effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity:
Aquatic organisms: Toxic to fish at 1-10 ppm levels.
Flora: Toxic to many plants. Has been recorded killing large trees at higher rates.
Fauna: Low toxicity to mammals.
Soil organisms: Toxic to soil algae. Degraded (slowly) by soil fungi and microbes.
Bees: Not toxic.
Long term: A relatively long lasting herbicide with soil residual activity.
Ozone effects: None recorded.
Persistence/degradation: (as per Environment Australia www.ea.gov.au)
Mobility: Can leach, especially in sandy soils. This may lead to unwanted damage to trees.
Bio-accumulative potential: Does not accumulate in fatty tissue ($K_{ow} \log P = 2.85$)

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, shake out boxes and rinse plastic bags before disposal. Treat rinsings as for product above.
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

UN Number: None.
UN proper shipping name:
ADG Class & subsidiary risks: Not a Dangerous Good for transport by road or rail, or by sea, or by air.
ADG Packing Group: N/A.
Special precautions: Do not store near foodstuffs.
Hazchem code: Xn Harmful.
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

Hazardous according to the criteria of Worksafe Australia.
Hazchem category: Xn Harmful.
Risk phrases: R48/22 Danger of serious damage to health by prolonged exposure if swallowed.
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16. OTHER INFORMATION

Prepared January 2005.