

SAFETY DATA SHEET



Page 1 of Total 6
Date of Issue: January 2014
MSDS No. FMC/DIU900/1

SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: FMC DIURON 900 WG HERBICIDE

Other Names: Diuron. Diuron is urea derivative herbicide
Use: A selective agricultural water dispersible granule herbicide.
Company: FMC Australasia Pty Ltd.
Address: 5 Palmer Place, Murarrie, Qld 4172
Telephone Number: 07 3908 9208 **Fax Number:** 07 3908 9221
Emergency Telephone Number: 1800 033 111 (All hours - Australia wide).

SECTION 2 HAZARDS IDENTIFICATION

**Classified as hazardous according to criteria of Safe Work Australia.
Not classified as a Dangerous Good according to the ADG Code.**

GHS Classification:

Specific Target Organ Toxicity – Repeated Exposure: Category 2.
Acute Toxicity - Oral: Category 4.
Carcinogenicity: Category 2.

Hazard statements:

H351 Suspected of causing cancer.
H302 Harmful if swallowed.
H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

Signal Word: WARNING.

Precautionary Statements:

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash hands, arms and face thoroughly after handling.
P260 Do not breathe dust, vapours or spray.
P270 Do not eat, drink or smoke when using this product.
P281 Use personal protective equipment as required.

Response:

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if feel unwell.
P314 Get medical advice/attention if you feel unwell.
P308+P313 IF exposed or concerned: Get medical advice/ attention:
P330 Rinse mouth.

Storage and Disposal:

P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

Pictograms:



SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients:**

CHEMICAL	CAS NUMBER	PROPORTION
Diuron	330-54-1	900 g/kg
Other ingredients determined not to be hazardous	mixture	Balance

SECTION 4 FIRST AID MEASURES**FIRST AID**

Swallowed: If swallowed do NOT induce vomiting. Wash mouth out with water. If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone 131 126.

Eye: If in eyes, gently brush granules away and rinse with water. If irritation occurs and persists, seek medical advice.

Skin: If on skin gently brush granules away. Wash skin with soap and water. If irritation occurs and persists, seek medical advice. Irritation of the skin is not expected. Launder contaminated clothing before re-use.

Inhaled: Remove patient to fresh air. If effects persist, obtain medical attention.

Advice to Doctors: Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Specific Hazard: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Product is combustible.

Extinguishing media: Foam, CO₂ or dry chemical. Soft stream water fog if no alternatives. Do not scatter spilled material with high pressure water jets. Contain all runoff.

Hazards from combustion products: On burning will emit toxic fumes oxides of carbon and nitrogen, cyanides, phosgene and possibly hydrogen chloride.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe or contact smoke, gases or vapours generated.

SECTION 6 ACCIDENTIAL RELEASE MEASURES

Emergency procedures: Isolate and post spill area. Keep out unprotected persons and animals. Wear cotton overalls buttoned at the neck and wrist and washable hat and elbow-length chemical resistant gloves. Large spills should be dyked or covered to prevent dispersal. Vacuum shovel or pump spilled material into an approved container and dispose of as listed in section 13 or according to the Australian Standard 2507 - Storage and Handling of Pesticides.

Material and methods for containment and cleanup procedures: To clean spill area, tools and equipment, wash with a solution of soap, water and acetic acid/vinegar. Follow this with a neutralisation step of washing the area with a bleach or caustic soda ash solution. Finally, wash with a strong soap and water solution. Absorb, as above, any excess liquid and add both solutions to the drums of waste already collected.

Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

This product is a herbicide and spills can damage crops, pastures and desirable vegetation. Prevent from entering drains, waterways or sewers. Use earthen bunds or absorbent bunding to prevent spreading of spillage.

SECTION 7 | HANDLING AND STORAGE

Precautions for Safe Handling: Ensure containers are kept closed until using product. Avoid contact with eyes and skin. Do not inhale dust or spray mist. If product on skin immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Conditions for Safe Storage: DO NOT store near (or allow to contact) fertilizers, fungicides or pesticides. Store in closed original containers, in a cool, well ventilated area away from children, animals, food and feedstuffs. Do not store for prolonged periods in direct sunlight.

SECTION 8 | EXPOSURE CONTROLS / PERSONAL PROTECTION**National Exposure Standards:**

Exposure guidelines have been established for the active ingredient in this product by Safe Work Australia.

Atmospheric Contaminant	Exposure Standard (TWA)	STEL (mg/m ³)
Diuron	10 mg/m ³	-

TWA = Time-weight Average STEL = Short term Exposure Limit

Biological Limit Values:

No biological limit allocated.

Engineering controls:

Keep containers closed when not in use. No special engineering controls are required, however make sure that the work environment remains clean and that dusts and mists are minimised.

Personal Protective equipment (PPE):

General: No special equipment is usually needed when this product. For general hygiene reasons it is advised that suitable gloves (preferably elbow length) are worn when skin contact is likely. Avoid contact with eyes and skin. Do not inhale dust or spray mist.

Personal Hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin before eating, drinking or smoking. Shower at the end of the workday.

SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Granular solid.
Odour:	No specific odour.
Boiling point:	No data available.
Freezing point:	No data available.
Specific Gravity:	Not applicable.
pH:	No data available.
Solubility in Water:	Product emulsifies in water.
Flammability:	Not flammable.
Flashpoint (°C):	Not flammable.
Flammability Limits (%):	Not established.
Poisons Schedule:	Product is exempted from poison scheduling.

SECTION 10 | STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight. Keep dry.

Incompatible materials: Strong oxidizing agent such as chlorates, nitrates, peroxides etc.

Hazardous decomposition products: his product is will decompose when burnt. Carbon dioxide and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds and oxides, in some circumstances hydrogen cyanide gas.

Hazardous reactions: Avoid contact of the concentrate with strong alkalis and alkaline materials such as lime. Polymerisation is unlikely.

SECTION 11 TOXICOLOGICAL INFORMATION**Potential Health Effects:**

No specific data is available for this product as no toxicity tests have been conducted on this product. Information presented is our best judgement based on similar products and/or individual components. As with all products for which limited data is available, caution must be exercised through the use of protective equipment and handling procedures to minimise exposure.

Acute

Swallowed: Low acute toxicity. Acute Oral LD₅₀ = 3400 mg/kg (rats).

Eye: The granules can cause physical discomfort if in the eye. May cause irritation, stinging, reddening and watering of the eyes.

Skin: Low acute dermal toxicity. Acute Dermal LD₅₀ > 2,000 mg/kg.

Inhaled: Inhalation of mists or sprays might produce respiratory irritation.

Chronic: Rats fed on very high doses over a two week period showed changes to their spleen and bone marrow. Moderate to high doses over a two year period produced changes to blood chemistry, increased mortality, growth retardation, abnormal blood pigment and anaemia. Low doses showed no adverse effects.

Carcinogenicity: Safe Work Australia has classified diuron in the occupational environment as a Carcinogen Category 3 substance. This means the evidence of carcinogenicity is inadequate in humans but sufficient in experimental animals, and may be placed in this category when there is strong evidence that the mechanism of carcinogenicity in experimental animals does not operate in humans.

Reproductive Effects: It is unlikely that diuron will cause reproductive effects in humans at expected levels of exposure. Daily low doses over three successive generations of rats caused significantly decreased body weight of offspring and the second and third generations. Fertility rates were unaffected.

Mutagenicity Effects: Indications are that diuron is not mutagenic.

Teratogenic effects: Diuron is teratogenic at high doses.

Organ toxicity: Lethal doses of Atrazine in test animals have caused congestion and/or haemorrhaging to the lungs, kidneys, liver, spleen, brain, and heart. Long-term consumption of high levels of Atrazine has caused tremors, changes in organ weights, and damage to the liver and heart.

Organ toxicity: Low doses of diuron over extended periods of time can cause enlargement of the liver and spleen.

Fate in animals: Diuron is excreted in the faeces and urine of test animals. Breakdown of the compound is similar in animals, plants, and soil. Cows fed very low doses of Diuron in their diets had small amounts of residues in whole milk. Cattle fed small amounts accumulated low levels of Diuron in fat and muscle, liver, and kidney

SECTION 12 ECOLOGICAL INFORMATION

Environmental Toxicology: Very toxic to aquatic organisms may cause long-term adverse effects to the aquatic environment. *Effects on birds:* Diuron is slightly toxic to birds. Bobwhite quail (dietary) LC₅₀ = 1730 ppm; Japanese quail and ring-necked pheasant LC₅₀ > 5000 ppm; Mallard ducks LC₅₀ is approximately 5000 ppm. *Effects on aquatic organisms:* The LC₅₀ (48 hour) values for Diuron range from 4.3 mg/L to 42 mg/L in fish, and range from 1 mg/L to 2.5 mg/L for aquatic invertebrates. The LC₅₀ (96-hour) is 3.5 mg/L for rainbow trout. Diuron is moderately toxic to fish and highly toxic to aquatic invertebrates. *Effects on other organisms:* Diuron is not toxic to bees.

Environmental Properties: Diuron is moderately to highly persistent in soils. Average field half-lives of diuron are from 90 to 160 days. Some pineapple fields contained residues 3 years after the last application. Mobility in the soil is related to organic matter and to the type of the residue. The metabolites are less mobile than the parent compound. *Breakdown in water:* Diuron is relatively stable in neutral water. Microbes are the primary agents in the degradation of Diuron in aquatic environments. *Breakdown in vegetation:* Diuron is readily absorbed through the root system of plants and less readily through the leaves and stems.

SECTION 13 DISPOSAL CONSIDERATIONS

Spills & Disposal: In the case of spillage, contain and absorb spilled material with absorbent material such as sand, clay or cat litter and dispose of waste as indicated below or according to the Australian Standard 2507 - Storage and Handling of Pesticides. Wear prescribed protective clothing and equipment. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. Dispose of drummed wastes, including decontamination solution, in accordance with the requirements of Local or State Waste Management Authorities.

Dangerous to Fish: Do NOT allow spilled product or wash solution to enter sewers, drains, dams, creeks or any other waterways.

Disposal of empty, non-returnable containers: Single rinse before disposal. Add rinsing to spray tank. DO NOT dispose of undiluted chemicals on-site. Break, crush or puncture container and deliver empty packaging for appropriate disposal to an approved waste management facility. Empty containers and product should not be burnt..

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: FMC Diuron 900 WG Herbicide is not classified as a Dangerous Goods under the Australian Code for the Transport of Dangerous Goods by Road and Rail in containers less than 3000 kilograms. Bulk shipments should use UN 3077, as per below.

Marine and Air Transport: FMC Diuron 900 WG Herbicide is a Marine Pollutant according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA). If transporting by sea or air the following Dangerous Goods Classification applies:-
UN 3077, Class 9 (Miscellaneous Dangerous Goods), Packing Group III, Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains 90% Diuron).

SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of Safe Work Australia. (Xn).

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is not a scheduled poison.

This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 68593.

Product is not classified as a Dangerous Good according to the ADG Code (7th Ed) in containers less than 3000 kilograms.

Product is classified as a Dangerous Good according to International Maritime Dangerous Goods (IMDG) Code and the International Air Transport Association (IATA).

Requirements concerning special training:

Check State or Territory regulations that require people who use pesticides in their job or business to have training in the application of the materials.

SECTION 16 OTHER INFORMATION

Issue Date: 24 January 2014. Valid for 5 years. (First issue).

Key to abbreviations and acronyms used in this SDS:

ADG Code: Australian Dangerous Goods Code (for the transport of dangerous goods by Road and Rail).

Ataxia: Inability to control the coordinate movements of the muscles.

Bradycardia: Is a resting heart rate of under 60 beats per minute (adults).

Carcinogen: An agent which is responsible for the formation of a cancer.

Clonic: An abnormality in neuromuscular activity characterized by rapidly alternating muscular contraction and relaxation.

Genotoxic: Capable of causing damage to genetic material, such as DNA.

Haematopoietic: Pertaining to the formation of blood or blood cells.

SECTION 16 OTHER INFORMATION (Continued)

Lavage: The irrigation or washing out of an organ, as of the stomach or bowel.
Mutagen: An agent capable of producing a mutation.
Oedema: Accumulation of fluid in tissues.
NOHSC: National Occupational Health and Safety Commission.
Teratogen: An agent capable of causing abnormalities in a developing foetus.
Safe Work Australia: Formally known as Australian Safety & Compensation Council (ASCC) which was formally known as the National Occupational Health & Safety Commission (NOHSC).

References

1. "Search Hazardous Substances". Safe Work Australia website. (2014).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)], October 2004.
3. Globally Harmonized System of Classification and Labelling of Chemicals (GHS). United Nations, 2009.

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End SDS.