



SAFETY DATA SHEET KARMEX[®] DF Herbicide

Section 1: Identification of the Substance and Supplier

Product name : KARMEX[®] DF Herbicide
Chemical name of active Ingredient(s): 800g/kg Diuron
Supplier: ADAMA New Zealand Limited
Level 1/19 Elms Street, Wakatu Estate, Stoke, Nelson, New Zealand
P.O.Box 1799, Nelson New Zealand.
Telephone +64 3 543 8275 Fax: +64 3 543 8274
Emergency Telephone: 0800 POISON (0800 764 766) 24 Hour Service

Section 2: Hazards Identification

HSNO Classifications: 6.1D, 6.3B, 6.4A, 6.8B, 6.9A, 9.1A, 9.2A, 9.3C
Most Important Hazards: **TOXICITY**
Harmful – Keep out of reach of children.
May be harmful if swallowed, inhaled or absorbed through the skin.
May cause mild skin irritation and eye irritation.
Warning – May cause reproductive/development damage from repeated oral exposure. May cause liver damage from repeated oral exposure at high doses.
ECOTOXICITY
Very toxic to aquatic organisms. Avoid contamination of any water supply with product or empty container.
Very toxic in the soil environment. Harmful to terrestrial vertebrates. Do not allow spray drift outside the target area

Section 3. Composition/Information on Ingredients

Substance/preparation	Preparation	
Information on hazardous ingredients *		
Common name	CAS No.	%
Diuron	330-54-1	80.00
Inert Ingredients	Not allocated	20.00

- **Occupational Exposure Limit(s), if available, are listed in section 8**
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Section 4: First-Aid Measures

Inhalation: If inhaled, remove from exposure and have patient lie down and keep quiet. If patient is not breathing, start artificial respiration immediately. Never give anything by mouth to an unconscious person. Call a physician if necessary.

Ingestion: If swallowed, DO NOT induce vomiting. For advice, contact the **National Poisons Centre (0800 764766)** or call a doctor immediately.

Skin contact: If split on the skin, remove contaminated clothing and wash affected areas of skin immediately.

Eye contact: If concentrate is splashed in eyes, flush with running water for at least 15 minutes. Take to hospital without delay. For advice contact the **National Poisons Centre 0800 POISON (0800 764766)**

Section 5: Fire-Fighting Measures

Flammable properties: Flammable Limits in Air, % by volume: LEL 0.070g/L. May be ignited by heat or open flame. Keep away from heat, sparks, and flames.

Fire/Explosion Hazard: Dust forms explosive mixture with air.

Extinguishing media: Water spray, foam, and dry chemical

Firefighting instructions: Wear self-contained breathing apparatus. Cool tank/container with water spray. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated.



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Hazchem code: 2X

Section 6: Accidental Release Measures

Spill precautions: Use appropriate Personal Protective Equipment during clean up. (See Section 8).

Spill containment: Dyke spill. Prevent liquid from entering the sewers, waterways, or low areas.

Methods for cleaning up: Shovel or sweep up. DO NOT flush with water. Place material in a clean, dry container and cover for disposal. Wash contaminated areas with water and detergent. Prevent liquid from entering sewers, waterways or low areas. Soak up with sawdust, sand or other absorbent material. Shovel or sweep up. Never return to container for reuse. (See section 13 for disposal instructions.)

Section 7: Handling and Storage

Handling: Avoid contact with skin and eyes. Avoid inhaling the vapour, or spray mist. Wash thoroughly after handling. Wash clothing after use.

Storage: Store in the closed, original container in a dry, well-ventilated area, as cool as possible out of direct sunlight and under lock and key. Keep from contact with fertilizers, fungicides and seeds. Do not store with Classes 1,2,3,2,4 or 5 substances. Stores containing more than 100kg of this product, either alone or in aggregate with other hazardous substances are subject to requirement of emergency management response plan, secondary containment and signage.

8. EXPOSURE CONTROLS/PERSONAL Section 8: Exposure Controls/Personal Protection

Engineering Controls: Use only in adequate ventilation. Keep container tightly closed.

Exposure standards: Diuron, AEL (Du Pont) 1mg/m³ (8 and 12 hr TWA) total dust.

Personal Protection: Avoid breathing spray mist or dust. Use respiratory equipment suitable for herbicide dust if exposure may exceed AEL value. Avoid contact with eyes and skin. Wear protective goggles, rubber gloves, boots and overalls during mixing and spraying.

Section 9: Physical and Chemical Properties

Physical state: Solid

Colour: Tan

Odour: Odourless

Solubility in water: Dispersible

Corrosivity: Non-corrosive

Oxidisation: Not an oxidiser

(Also, see section 5 & 10)

Section 10: Stability and Reactivity

Stability: Stable at normal temperatures and storage conditions

Incompatible materials: No incompatibilities reasonably foreseeable

Decomposition: Decomposition will not occur

Polymerisation: Polymerisation will not occur

Section 11. Toxicological Information

Acute Effects:

Eye: Produced mild transient conjunctival irritation without effect on cornea or iris.

Skin: A skin irritant but not a skin sensitizer

Inhalation: None established for formulated product.

Swallowed: Slightly toxic by ingestion.

Chronic Effects:



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- Diuron:** The compound is a skin irritant, is the eye irritant, but is not a skin sensitizer in animals. Toxic effects described in animals from short exposures by inhalation, ingestion or skin contact includes: blood effects, spleen effects, thyroid effects, methaemoglobinaemia, and non-specific effects such as eight loss and irritation. Tests in some animals demonstrate carcinogenic activity. Tests in animals demonstrate no embryo toxic activity at concentrations equal to or less than the RLV of 10 mg/m³. Animal testing indicates that this compound does not have mutagenic or reproductive effects.
- Carcinogen:** None of the components in this material are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.
- Toxicity Data:**
Diuron: Acute Oral LD⁵⁰ (rat) 6,964 mg/kg (males) 3.956 mg/kg (females)
Acute Dermal LD⁵⁰ (rabbit): > 2,000 mg/kg
Inhalation LC⁵⁰ (4hr) > 5mg/L

Section 12: Ecological Information

- Common name:** Captan
Fish LC⁵⁰ rainbow trout 5.6, bluegill sunfish 5.9, guppies 234mg/L
Daphnia LC⁵⁰ (986hr) 12mg/L. Algae EC⁵⁰ (96hr) 0.0024mg/L. (9.1A)
Very toxic to aquatic organisms. Avoid contamination of any water supply with chemical or empty container. EC⁵⁰ seedling plants 0.016mg/kg soil-herbicidal. DT⁵⁰ 90-180 days.
Koc 400, Kow log P 2.85 (25°C) (9.2A) Birds Dietary LC⁵⁰ (8 days) bobwhite quail 1,730 mg/kg, Japanese quail, mallard duck, pheasant >5,000mg/kg diet. Rat LD⁵⁰ 1,017mg/kg (9.3C). Bee LD⁵⁰ (48hr) 145.03µ/bee. BCF 74

Section 13: Disposal Considerations

- Methods of disposal:** Ensure the container is empty. Burn, if circumstances, especially wind direction permit, otherwise bury in an approved landfill. Do not reuse container. Dispose of this product only by using according to the label. Always follow local authority requirements.

Section 14: Transport Information

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|-----------------------------|---|
| UN Number | 3077 |
| Proper shipping name | Environmentally hazardous substance, Solid, N.O.S, (Diuron) |
| DG Class | 9 |
| Packing Group | III |
| Hazchem Code | 2X |
| Marine Pollutant | Yes |
| IER Guide page | 47 |

- National transport regulations:** Do not carry this product on a passenger service vehicle.
Segregation: Check the land transport Rule Dangerous Goods 1999, Rule 45001 for additional information. Sea transport may require additional segregation. Refer: NZS5433; Sea Segregation, or the International Maritime Dangerous Goods Code for details.

Section 15: Regulatory Information

- NZFSA Approval:** Registered pursuant to the ACVM Act 1997. No P00008.
See www.nzfsa.govt.nz/acvm for registration conditions.
- Approved pursuant to the HSNO Act 1996, Approval No. HSR000228
See www.ermanz.govt.nz for registration conditions



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HSNO Classifications:

HAZARD CLASSIFICATIONS

Classifications 6.1D, 6.3B, 6.4A, 6.8B, 6.9A, 9.1A, 9.2A, 9.3C



ECOTOXIC

APPROVED HANDLER - this product must be under the care of an approved handler when it is applied in a wide dispersive manner or used by a commercial contractor.

RECORD KEEPING

Records of use must be kept under certain circumstances – see The New Zealand Standards for Management of Agrichemicals (NZS8409) for details.

Section 16: Other Information

Note: This product is a registered agricultural chemical and must be therefore be used in accordance with the container label directions. A comprehensive package of toxicological and environmental data for the active ingredients of this product has been submitted to the Government health and environment authorities and has been evaluated by expert toxicologists and environmental scientists.

The information contained in the Safety Data sheet is correct to the best of our knowledge at the date of issue. It is intended as a guide for the safe use, handling, disposal, storage and transportation and is not intended as a warranty or as a specification. The information relates only to the product specified and may not be suitable for combinations with other materials or in processes other than those specifically described herein.

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HISTORY

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