

**1. IDENTIFICATION**

Product name: **Karmex® DF**  
 Chemical name of active ingredient(s): Diuron: (3-(3,4-dichlorophenyl)-1,1-dimethylurea)  
 Manufacturer/Registrant: Makhteshim Agan of North America, Inc.  
 4515 Falls of Neuse Road, Suite 300  
 Raleigh, NC 27609  
 Phone: 919-256-9300  
 For fire, spill, and/or leak emergencies, contact Infotrac: Phone: 1-800-535-5053  
 For medical emergencies and health and safety inquiries, contact Prosar: Phone: 1-877-250-9291

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

COMMON NAME	CAS NO.	%	OSHA PEL	ACIGH TLV	OTHER	NTP/IARC/OSHA (Carcinogen)
Diuron	330-54-1	80	NA	10 mg/m <sup>3</sup>	NA	NA
Talc	14807-96-6	11.3	NA	2.0 mg/m <sup>3</sup>	NA	IARC – 3*

\*IARC - Rating 3: The agent is unclassifiable as to carcinogenicity in humans.

**3. HAZARDS IDENTIFICATIONS**

**PHYSICAL PROPERTIES**

Appearance: Beige pellets  
 Odor: None

**EMERGENCY OVERVIEW:** CAUTION. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with eyes or clothing.

**PRIMARY ROUTES OF ENTRY:** Ingestion, skin and eye contact

**SYMPTOMS OF ACUTE EXPOSURE:**

- Ingestion:** Drowsiness, hyperreflexia, irritability, diarrhea, hyperthermia and weight loss
- Skin Absorption:** None known.
- Inhalation:** Drowsiness, irritability, diarrhea, respiratory tract irritation.
- Eyes:** May cause eye irritation.

**EFFECTS OF CHRONIC OVEREXPOSURE:** Prolonged or repeated overexposure may cause skin and/or eye irritation. Extreme overexposure may cause glycosuria, proteinuria, and aciduria. Long-term exposure may also cause enlarging of the liver and/or spleen

**EXISTING MEDICAL CONDITIONS POSSIBLY AGGRAVATED BY EXPOSURE:** Skin contact may aggravate preexisting skin conditions. Inhalation of mists may aggravate preexisting respiratory conditions.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of nitrogen and carbon, hydrogen chlorides.

**4. FIRST AID**

FIRST AID	
<b>IF ON SKIN OR CLOTHING:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact Prosar at 1-877-250-9291 for emergency medical treatment information.

## 5. FIRE FIGHTING MEASURES

**FLASH POINT:** Not applicable.

**FLAMMABLE LIMITS (% in air):** Not determined

**AUTOIGNITION TEMPERATURE:** Not determined

**FLAMMABILITY:** Not Applicable

**UNUSUAL FIRE, EXPLOSION AND REACTIVITY HAZARDS:** Noxious fumes may be emitted under fire conditions.

**EXTINGUISHING MEDIA:** Use carbon dioxide or dry chemical for small fires and water fog or foam (alcohol, polymer or ordinary) for large fires. Water stream may spread flames.

**SPECIAL FIRE FIGHTING PROCEDURES:** Fire fighters should use self-contained breathing apparatus and full turnout gear. Prevent runoff of firewater. Avoid exposure to smoke.

## 6. ACCIDENTAL RELEASE MEASURES

**IN CASE OF SPILLS OR LEAKS:** Dike the area using absorbent materials such as sand or clay. Recover and contain as much product as possible using absorbent. Clean spill area using a solution of water and detergent. Collect and contain wash water and all contaminated absorbent for disposal. If spilled on the ground, the affected area should be excavated to a depth of 1-2 inches. Prevent the spilled product or washing from reaching public sewers or waterways. Wear appropriate protective equipment during the cleanup. Ensure that tools and equipment are adequately decontaminated.

## 7. HANDLING AND STORAGE

**PRECAUTIONS TO BE TAKEN IN HANDLING:** Avoid contact with skin and eyes. Prevent eating, drinking, tobacco usage, and cosmetic application in areas where there is a potential for exposure to the material. Always wash thoroughly after handling. Do not contaminate water, food or feed by storage, disposal or by cleaning equipment.

**PRECAUTIONS TO BE TAKEN IN STORAGE:** Store in original container only, away from other pesticides, fertilizer, food, or feed.

**STORAGE TEMPERATURE (MIN/MAX):** Normal ambient temperatures. Avoid excessive heat.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.**

**FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.**

**EYE PROTECTION:** Protective eyewear (e.g., goggles or full-face shield).

**SKIN PROTECTION:** Long-sleeved shirt and long pants, shoes plus socks. Use apron and coveralls when necessary.

**HAND PROTECTION:** Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride.

**RESPIRATOR REQUIREMENTS:** Use a dust/mist respirator.

**ADDITIONAL PROTECTIVE MEASURES:** Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS:**

Users should:

MATERIAL SAFETY DATA SHEET

Karmex® DF

Page 3 of 4

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**EXPOSURE GUIDELINES:** Refer to Section 2.

**ENGINEERING CONTROLS:** Refer to product label.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE:** Beige pellets

**ODOR:** None

**FLASH POINT:** Not applicable

**pH:** 8.56

**MELTING POINT (DIURON):** 158-159°C

**SPECIFIC GRAVITY/DENSITY (BULK):** 0.619/mL (5.17 lb/gal)

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable under normal conditions.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Excessive heat.

**MATERIALS TO AVOID:** None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of nitrogen and carbon, hydrogen chlorides.

**11. TOXICOLOGICAL INFORMATION**

**ACUTE TOXICITY/IRRITATION STUDIES**

Acute Oral LD50 (Rat):	1,879 mg/kg
Acute Dermal LD50 (Rabbit):	>5,000 mg/kg
Acute Inhalation LC50 (Rat):	>2.03 mg/L
Eye Irritation (Rabbit):	Mildly irritating.
Dermal Irritation (Rabbit):	Non-irritating.
Dermal Sensitization:	Not a skin sensitizer

**12. ECOLOGICAL INFORMATION**

**ENVIRONMENTAL HAZARDS:** Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not apply when weather conditions favor drift from areas treated. Cover or incorporate spills.

**13. DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Do not contaminate water, food, or feed by storage or disposal. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Dispose of product containers, waste containers, and residues according to label instructions and local, state, and federal health and environmental regulations.

**14. TRANSPORT INFORMATION**

**DOT CLASSIFICATION:**

**Package size <125 lbs.:** Not regulated

**Package size >=125 lbs.:** UN3077, Environmentally hazardous substances, solid, N.O.S. (Diuron), 9, PG III, RQ

**INTERNATIONAL TRANSPORTATION:**

**IMO (vessel):**

**Package size <125 lbs.:** Not regulated

**Package size >=125 lbs.:** UN3077, Environmentally hazardous substances, solid, N.O.S. (Diuron), 9, PGIII, RQ

**IATA (air):**

**Package size <125 lbs.:** Not regulated

**Package size >=125 lbs.:** UN3077, Environmentally hazardous substances, solid, N.O.S. (Diuron), 9, PGIII, RQ

**15. REGULATORY INFORMATION**

**SARA TITLE III CLASSIFICATION:**

Section 302: Not applicable.  
Section 311/312: Acute health hazard (immediate)  
Chronic health hazard (delayed)  
Section 313: Diuron (80%) CAS#: 330-54-1

**CA PROPOSITION 65:** This product contains a material (diuron) known to the State of California to cause cancer.

**CERCLA RQ:** Diuron 100 lbs. (125 lbs. of product)

**RCRA CLASSIFICATION:** Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

**TSCA STATUS:** The ingredients of this product are listed on the TSCA inventory or are exempt.

**16. OTHER INFORMATION**

<b>NFPA HAZARD RATINGS</b>	<b>NFPA</b>	
<b>HEALTH:</b>	2	0 LEAST
<b>FLAMMABILITY:</b>	0	1 SLIGHT
<b>REACTIVITY:</b>	0	2 MODERATE
		3 HIGH
		4 SEVERE

**MSDS DATE:** 8-2-11. Supersedes version dated 5-12-11. Changes made to Section 1.

The information herein is given in good faith, but no warrant, express or implied, is made. Consult Makhteshim Agan of North America, Inc. for further information.