

**DuPont™ Karmex® XP Herbicide**

Version 2.0

Revision Date 04/18/2011

Ref. 130000029417

This SDS adheres to the standards and regulatory requirements of Canada and may not meet the regulatory requirements in other countries.

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	DuPont™ Karmex® XP Herbicide
Tradename/Synonym	:	DPX-14740 Karmex 80DF Direx 80DF B12017289 DIURON: 3-[3,4-Dichlorophenyl]-1,1-dimethylurea
MSDS Number	:	130000029417
Manufacturer	:	E.I. du Pont Canada Company P.O. Box 2200, Streetsville Mississauga, ON L5M 2H3 Canada
Product Information	:	1-800-387-2122
Medical Emergency	:	1-800-441-3637 (24 hours)

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Caution

Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin . Avoid contact with skin, eyes and clothing.

Potential Health Effects

This section includes potential acute adverse effects which could occur if this material is not used according to the label.

Skin

Diuron : May cause skin irritation. Discomfort, Rash.

Eyes

Diuron : May cause eye irritation. Discomfort, tearing, Blurred vision.

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Ingestion
Diuron : May cause: Abnormal decrease in number of red blood cells (anaemia) which could produce tiredness, rapid heartbeat, dizziness, pale skin, leg cramps, shortness of breath

Repeated exposure
Diuron : Adverse effects from repeated exposure may include: Bladder damage altered blood chemistry

Target Organs
Diuron : Blood Urinary system Bladder

Carcinogenicity
None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Diuron	330-54-1	80 %
Other Ingredients		20 %

SECTION 4. FIRST AID MEASURES

Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact : Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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- Inhalation : Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.
- Ingestion : Call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Do not give anything by mouth to an unconscious person.
- General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
For medical emergencies involving this product, call toll free 1-800-441-3637. See Label for Additional Precautions and Directions for Use.

SECTION 5. FIRE-FIGHTING MEASURES

- Flammable Properties
Autoignition temperature : 455 °C (851 °F)
- Lower explosion limit : 0.070 g/l
- Fire and Explosion Hazard : Under severe dusting conditions, this material may form explosive mixtures in air.
- Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO2)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)
- Firefighting Instructions : In the event of fire, wear self-contained breathing apparatus. Wear full protective equipment.
(on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers / tanks with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. ACCIDENTAL RELEASE MEASURES

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

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- Safeguards (Personnel) : Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Use personal protective equipment.
- Spill Cleanup : Sweep up and shovel into suitable containers for disposal. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.
- Accidental Release Measures : Prevent material from entering sewers, waterways, or low areas. Never return spills in original containers for re-use.

SECTION 7. HANDLING AND STORAGE

- Handling (Personnel) : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
- Storage : Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in original container. Store in a cool, dry place. Keep out of the reach of children.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Engineering controls : Ensure adequate ventilation. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS. Refer to the product label for additional Engineering Controls.
- Personal protective equipment
Skin and body protection : Pilots, flaggers and groundboom applicators must wear:
Long sleeved shirt and long pants
Shoes plus socks
Mixers, loaders, applicators and other handlers must wear:
Long sleeved shirt and long pants

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Shoes plus socks

Chemical resistant gloves made of any waterproof material

A NIOSH approved dust/mist filtering respirator with any N, R, P, or HE filter or with approval number prefix TC-21C.

Chemical resistant apron when mixing, loading, or cleaning equipment or spills.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

Coveralls

Chemical resistant gloves made of any waterproof material

Shoes plus socks

Protective measures : Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Exposure Guidelines

Exposure Limit Values

Diuron

TLV

(ACGIH)

10 mg/m³

TWA

AEL *

(DUPONT)

1 mg/m³

8 & 12 hr. TWA Total dust.

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Form : solid, granules
Color : brown
Density : 40 lb/ft³
Water solubility : dispersible

SECTION 10. STABILITY AND REACTIVITY

Stability : Stable at normal temperatures and storage conditions.

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Incompatibility : No materials to be especially mentioned.

Hazardous reactions : Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

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Inhalation 4 h LC50 : > 2.02 mg/l , rat

Dermal LD50 Dermal : > 5,000 mg/kg , rabbit

Oral LD50 Oral : > 5,000 mg/kg , rat

Skin irritation : slight irritation, rabbit

Eye irritation : Moderate eye irritation, rabbit

Sensitisation : Animal test did not cause sensitization by skin contact., guinea pig

Diuron

Repeated dose toxicity :

The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral

rat

Red blood cell destruction causing abnormal decrease in number of red blood cells (anaemia), Spleen effects, bone marrow changes, Kidney effects, Bladder effects, Reduced body weight gain

Oral

dog

Red blood cell destruction causing abnormal decrease in number of red blood cells (anaemia), Spleen effects, bone marrow changes, Reduced body weight gain

Inhalation

rat

Red blood cell destruction causing abnormal decrease in number of red blood cells (anaemia), Spleen effects

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Carcinogenicity	: The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions. An increased incidence of tumours was observed in laboratory animals.
Mutagenicity	: Overall weight of evidence indicates that the substance is not mutagenic.
Reproductive toxicity	: Animal testing did not show any effects on fertility.
Teratogenicity	: Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

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96 h LC50	: Oncorhynchus mykiss (rainbow trout) 190 mg/l
96 h LC50	: Lepomis macrochirus (Bluegill sunfish) 300 mg/l

Diuron

72 h EC50	: Algae 0.018 mg/l
72 h NOEC	: Algae 0.01 mg/l
48 h EC50	: Daphnia magna (Water flea) 1.4 mg/l

Additional ecological information	: Environmental Hazards: For Terrestrial Uses: 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 when cleaning equipment or disposing of equipment washwaters or rinsate. See product label for additional application instructions relating to environmental precautions.
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SECTION 13. DISPOSAL CONSIDERATIONS

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Waste Disposal : Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Disposal : Container Refilling and Disposal:
Refer to the product label for instructions.
Do not transport if this container is damaged or leaking.

In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

SECTION 14. TRANSPORT INFORMATION

IATA_C	UN number	: 3077
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Diuron)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9MI
IMDG	UN number	: 3077
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Diuron)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Diuron)

Not regulated as a hazardous material by TDG.

SECTION 15. REGULATORY INFORMATION

PCP Registration # : 21252



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Remarks : Regulated under the Pest Control Products Act - WHMIS exempt.

SECTION 16. OTHER INFORMATION

MSDS preparation date : 04/18/2011

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Contact person : E.I. DuPont Canada Company, Mississauga, Ontario, L5M 2H3

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