

**Diligent™ Herbicide**

Version 4.0

Issue Date : 04/05/2019 Ref. 130000051742  
Revision Date : 04/01/2019

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 : Diligent™ Herbicide  
Tradename/Synonym : DPX-UVK76

SDS Number : 130000051742

Product Use : Herbicide  
Manufacturer : Production Agriscience Canada Company  
P.O. Box 730, 7398 Queen's Line  
Chatham, Ontario  
N7M 5L1  
Canada

Product Information : 1-800-667-3852  
Medical Emergency : 1-800-441-3637 (24 hours)

**SECTION 2. HAZARDS IDENTIFICATION**

Potential Health Effects

Eyes

Flumioxazin : May cause eye irritation. May cause: Tearing, redness, or discomfort..

Inhalation

Flumioxazin : Harmful by inhalation.

Ingestion

Chlorimuron ethyl : Gross overexposure 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

Flumioxazin : May impair fertility. May cause harm to the unborn child.

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.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No.	Concentration
Flumioxazin	103361-09-7	40.59 %
Chlorimuron ethyl	90982-32-4	5.14 %
Other Ingredients		54.27 %

Present as an impurity in the clay component of this product:

Titanium Dioxide		<1 %
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**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.
- Inhalation** : Move to fresh air. Artificial respiration and/or oxygen may be necessary. 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.

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General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Water spray, Foam, Dry chemical, Carbon dioxide (CO2)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)
- Firefighting Instructions : Wear full protective clothing and self-contained breathing apparatus. (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.

**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.

- Safeguards (Personnel) : Evacuate personnel to safe areas. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Wear suitable protective equipment.
- Spill Cleanup : Sweep up and shovel into suitable containers for disposal.
- Accidental Release Measures : Prevent material from entering sewers, waterways, or low areas. Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

**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.
- Handling (Physical Aspects) : Keep away from heat and sources of ignition.

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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.

Personal protective equipment

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. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Use this product in accordance with its label.

Exposure Guidelines

Exposure Limit Values

None established.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Form : granules

**SECTION 10. STABILITY AND REACTIVITY**

Stability : Stable at normal temperatures and storage conditions.

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Conditions to avoid : None reasonably foreseeable.  
Incompatibility : None reasonably foreseeable.  
Hazardous reactions : Polymerization will not occur.

**SECTION 11. TOXICOLOGICAL INFORMATION**

Flumioxazin

Dermal LD50 : > 2,000 mg/kg , Rabbit

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

Inhalation 4 h LC50 : > 3.93 mg/l , Rat

Skin irritation : No skin irritation, Rabbit

Eye irritation : No eye irritation, Rabbit  
Minimal effects that do not meet the threshold for classification.

Skin sensitization : Does not cause skin sensitisation., Guinea pig

Repeated dose toxicity : Ingestion  
Rat

No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification., altered hematology, anemia, Kidney effects, Organ weight changes

Ingestion  
Dog

No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification., altered hematology, altered blood chemistry, Organ weight changes, Liver effects

Ingestion  
Mouse

No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for

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classification., Liver effects

Carcinogenicity : Animal testing did not show any carcinogenic effects.

Reproductive toxicity : Experiments have shown reproductive toxicity effects on laboratory animals.

Teratogenicity : Animal testing in one species showed effects on embryo-foetal developmental at levels below those causing maternal toxicity; however, no developmental toxicity was seen in a different species. Mechanistic data supports the position that the effects observed in animals are not relevant to humans.

Chlorimuron ethyl

Dermal LD50 : > 5,000 mg/kg , Rabbit  
The result is based on a weight of evidence approach.

Oral LD50 : 4,102 mg/kg , Rat

Inhalation 4 h LC50 : > 5 mg/l , Rat

Skin irritation : No skin irritation, Guinea pig

Eye irritation : No eye irritation, Rabbit

Skin sensitization : Does not cause skin sensitisation., Guinea pig

Repeated dose toxicity :

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

Dermal  
Rabbit

No toxicologically significant effects were found.

Oral  
Dog

No toxicological effects warranting significant target organ toxicity classification were seen below the recommended guidance values for classification., Abnormal decrease in number of red blood cells

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Oral  
Rat

No adverse effect has been observed in chronic toxicity tests.

- Carcinogenicity : Not classifiable as a human carcinogen.  
Animal testing did not show any carcinogenic effects.
- Reproductive toxicity : No toxicity to reproduction
- Teratogenicity : Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.

Titanium Dioxide

- Carcinogenicity : Based upon all available study results, DuPont scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.

**SECTION 12. ECOLOGICAL INFORMATION**

Aquatic Toxicity

Flumioxazin

- 96 h LC50 : *Cyprinus carpio* (Carp) > 1.3 mg/l
- 72 h EC50 : *Desmodesmus subspicatus* (green algae) 0.0006 mg/l
- 72 h NOEC : *Desmodesmus subspicatus* (green algae) 0.00023 mg/l
- 48 h EC50 : *Americamysis bahia* (mysid shrimp) 0.23 mg/l
- 21 d : NOEC *Oncorhynchus mykiss* (rainbow trout) > 0.0077 mg/l
- 21 d : NOEC *Americamysis bahia* (mysid shrimp) > 0.015 mg/l

Chlorimuron ethyl

- 96 h LC50 : *Oncorhynchus mykiss* (rainbow trout) > 1,000 mg/l
- 96 h LC50 : *Lepomis macrochirus* (Bluegill sunfish) > 100 mg/l
- 72 h EC50 : *Pseudokirchneriella subcapitata* (green algae) 0.001 mg/l

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48 h EC50 : Daphnia magna (Water flea) > 1,000 mg/l

Additional 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 when cleaning equipment or disposing of equipment washwaters or rinsate. Do not apply where/when conditions favour runoff. See product label for additional application instructions relating to environmental precautions.

**SECTION 13. DISPOSAL CONSIDERATIONS**

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.

**SECTION 14. TRANSPORT INFORMATION**

IATA_C	UN number	: 3077
	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Flumioxazin, Chlorimuron ethyl)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
IMDG	UN number	: 3077
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Flumioxazin, Chlorimuron ethyl)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Flumioxazin, Chlorimuron ethyl)

Not regulated as a hazardous material by TDG.



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**SECTION 15. REGULATORY INFORMATION**

PCP Registration # : 31494  
Remarks : No substances are subject to a Significant New Activity Notification.

**SECTION 16. OTHER INFORMATION**

MSDS preparation date : 04/01/2019

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Contact person : Production Agriscience Canada Company, Chatham, Ontario, N7M 5L1

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