

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.

Diligent™ Herbicide

Version 4.0

Issue Date : 04/05/2019
Revision Date : 04/01/2019

Ref. 130000051742

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 %
------------------	--	------

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.

Diligent™ Herbicide

Version 4.0

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

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.

Diligent™ Herbicide

Version 4.0

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

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.

Diligent™ Herbicide

Version 4.0

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

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

Diligent™ Herbicide

Version 4.0

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

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

Diligent™ Herbicide

Version 4.0

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

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

Diligent™ Herbicide

Version 4.0

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

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.

Diligent™ Herbicide

Version 4.0

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

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

(TM) Trademark of E.I. du Pont de Nemours and Company.

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.