



Engarde Herbicide

Version 1.0

Revision Date 03/15/2016

Ref. 130000139999

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 : Engarde Herbicide
 Tradename/Synonym : DPX-Q9H38 45.7WG BLEND (ENGARDE)

SDS Number : 130000139999

Product Use : Herbicide
 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. 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.

Eyes : May cause: Irritation with discomfort, pain, redness, or visual impairment.

Repeated exposure

Quartz

: DuPont has classified this material as a known human carcinogen.

Carcinogenicity

Material

IARC

OSHA

ACGIH

**Engarde Herbicide**

Version 1.0

Revision Date 03/15/2016

Ref. 130000139999

Titanium dioxide

2B

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Concentration
Rimsulfuron	122931-48-0	4.31 %
Mesotrione	104206-82-8	41.38 %
Other Ingredients		54.16 %

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

Titanium Dioxide		<1 %
Quartz		<1 %

SECTION 4. FIRST AID MEASURES

- Skin contact : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.
- 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 : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.



Engarde Herbicide

Version 1.0

Revision Date 03/15/2016

Ref. 130000139999

- Ingestion : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.
- 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, thoroughly ventilate area, use self-contained breathing apparatus. Use personal 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



Engarde Herbicide

Version 1.0

Revision Date 03/15/2016

Ref. 130000139999

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.

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

Skin and body protection : Applicators and other handlers must wear:
 Long sleeved shirt and long pants
 Chemical-resistant gloves, Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils
 Shoes plus socks
 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, Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all greater than or equal to 14 mils
 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. Use this product in accordance with its label.

Exposure Guidelines
 Exposure Limit Values

Kaolin TLV	(ACGIH)	2 mg/m3	TWA Respirable fraction.
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Remarks	The value is for particulate matter containing no asbestos and <1% crystalline silica.
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Rimsulfuron



Engarde Herbicide

Version 1.0

Revision Date 03/15/2016

Ref. 130000139999

AEL *	(DUPONT)	5 mg/m ³	8 & 12 hr. TWA Total dust.
AEL *	(DUPONT)	2.5 mg/m ³	8 & 12 hr. TWA Respirable dust.
Titanium dioxide TLV	(ACGIH)	10 mg/m ³	TWA
AEL *	(DUPONT)	10 mg/m ³	8 & 12 hr. TWA Total dust.
AEL *	(DUPONT)	5 mg/m ³	8 & 12 hr. TWA Respirable dust.
Quartz TLV	(ACGIH)	0.025 mg/m ³	TWA Respirable fraction.
AEL *	(DUPONT)	0.01 mg/m ³	12 hr. TWA Respirable dust.
AEL *	(DUPONT)	0.02 mg/m ³	8 hr. TWA Respirable dust.
Naphthalene TLV	(ACGIH)	10 ppm	TWA
AEL *	(DUPONT)	0.1 ppm	8 & 12 hr. TWA

* 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
pH : 3.4 - 4.4



Engarde Herbicide

Version 1.0

Revision Date 03/15/2016

Ref. 130000139999

SECTION 10. STABILITY AND REACTIVITY

- Stability : Stable at normal temperatures and storage conditions.
- Conditions to avoid : None reasonably foreseeable.
- Incompatibility : No materials to be especially mentioned.
- Hazardous reactions : Polymerization will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Engarde Herbicide

Inhalation 4 h Acute toxicity estimate : > 2.58 mg/l , Rat

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

Oral Acute toxicity estimate : > 5,000 mg/kg , Rat

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

Eye irritation : Mild eye irritation, Rabbit

Sensitisation : Did not cause sensitisation on laboratory animals., Guinea pig
Mouse

Further information : Information given is based on data on the components.

Rimsulfuron

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

Oral
multiple species

altered blood chemistry, Liver effects, Organ weight changes

Carcinogenicity : Did not show carcinogenic effects in animal experiments.



Engarde Herbicide

Version 1.0

Revision Date 03/15/2016

Ref. 130000139999

Mutagenicity : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Did not show mutagenic effects in animal experiments.

Reproductive toxicity : Animal testing did not show any effects on fertility.

Teratogenicity : Evidence suggests the substance is not a developmental toxin in animals.

Mesotrione

Carcinogenicity : Not classifiable as a human carcinogen.

Reproductive toxicity : No toxicity to reproduction

Teratogenicity : Animal testing showed no developmental 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.

Quartz

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

Inhalation
Fluid retention in lungs (pulmonary oedema), lung effects, Inflammation, Chronic lung disease, Fibrosis

Carcinogenicity : Human carcinogen.

DuPont has classified this material as a known human carcinogen.

SECTION 12. ECOLOGICAL INFORMATION

Aquatic Toxicity

Rimsulfuron

96 h LC50 : Oncorhynchus mykiss (rainbow trout) > 390 mg/l

96 h LC50 : Lepomis macrochirus (Bluegill sunfish) > 390 mg/l



Engarde Herbicide

Version 1.0

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- 120 h EbC50 : Selenastrum capricornutum (green algae) 1.6 mg/l
- 48 h EC50 : Daphnia magna (Water flea) > 360 mg/l
- 90 d : NOEC Oncorhynchus mykiss (rainbow trout) 110 mg/l
- 21 d : NOEC Daphnia magna (Water flea) 0.82 mg/l

Mesotrione

- 96 h LC50 : Oncorhynchus mykiss (rainbow trout) > 120 mg/l
- 72 h EC50 : Pseudokirchneriella subcapitata (green algae) 4.5 mg/l
- 48 h EC50 : Daphnia magna (Water flea) 900 mg/l

Environmental Fate

Rimsulfuron

Biodegradability : According to the results of tests of biodegradability this product is not readily biodegradable.

Bioaccumulation : Does not bioaccumulate.

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.

**Engarde Herbicide**

Version 1.0

Revision Date 03/15/2016

Ref. 130000139999

SECTION 14. TRANSPORT INFORMATION

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

Not regulated as a hazardous material by DOT.

Not regulated as a hazardous material by TDG.

SECTION 15. REGULATORY INFORMATION

PCP Registration #	: 31595
Remarks	: Regulated under the Pest Control Products Act - WHMIS exempt.

SECTION 16. OTHER INFORMATION

MSDS preparation date : 03/15/2016

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Engarde Herbicide

Version 1.0

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

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