

**DuPont™ Resolve® Q Herbicide**

Version 2.0

Revision Date 05/31/2013

Ref. 130000043418

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

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : DuPont™ Resolve® Q Herbicide  
Tradename/Synonym : DPX-QFU30 WG  
B12578340  
Rimsulfuron: N-((4,6-dimethoxypyrimidin-2-yl)aminocarbonyl)-3-(ethylsulfonyl)-2-pyridinesulfonamide  
Thifensulfuron-methyl: Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate

MSDS Number : 130000043418

Product Use : Herbicide

Manufacturer : DuPont  
1007 Market Street  
Wilmington, DE 19898

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)  
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)  
Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

**SECTION 2. HAZARDS IDENTIFICATION**

## Emergency Overview

## Caution

Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with eyes or 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


**DuPont™ Resolve® Q Herbicide**

Version 2.0

Revision Date 05/31/2013

Ref. 130000043418

Thifensulfuron methyl : May cause skin irritation.  
May cause: Irritation with discomfort or pain, redness or rash, itching or swelling.

Isoxadifen-ethyl : May cause sensitisation by skin contact.

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

## Inhalation

Thifensulfuron methyl : May cause: Respiratory irritation, Discomfort, Cough.

Isoxadifen-ethyl : May cause respiratory tract irritation.

## Ingestion

Rimsulfuron : Abnormal liver function

Isoxadifen-ethyl : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

## Carcinogenicity

Material IARC NTP OSHA

Titanium dioxide 2B

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

Component	CAS-No.	Concentration
Rimsulfuron	122931-48-0	18.4 %
Thifensulfuron methyl	79277-27-3	4 %
Isoxadifen-ethyl	163520-33-0	9.2 %


**DuPont™ Resolve® Q Herbicide**

Version 2.0

Revision Date 05/31/2013

Ref. 130000043418

Other Ingredients		68.4 %
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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. 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. FIREFIGHTING MEASURES**

- Suitable extinguishing media** : Water spray, Foam, Dry chemical, Carbon dioxide (CO2)

**DuPont™ Resolve® Q Herbicide**

Version 2.0

Revision Date 05/31/2013

Ref. 130000043418

- Unsuitable extinguishing media : High volume water jet, (contamination risk)
- Firefighting Instructions : Wear full protective clothing and self-contained breathing apparatus. Control Runoff. Evacuate personnel and keep upwind of fire. (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.
- 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.


**DuPont™ Resolve® Q Herbicide**

Version 2.0

Revision Date 05/31/2013

Ref. 130000043418

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

Rimsulfuron AEL *	(DUPONT)	5 mg/m3	8 & 12 hr. TWA	Total dust.
AEL *	(DUPONT)	2.5 mg/m3	8 & 12 hr. TWA	Respirable dust.
Thifensulfuron methyl AEL *	(DUPONT)	5 mg/m3	8 & 12 hr. TWA	Total dust.
Titanium dioxide PEL:	(OSHA)	15 mg/m3	8 hr. TWA	Total dust.

**DuPont™ Resolve® Q Herbicide**

Version 2.0

Revision Date 05/31/2013

Ref. 130000043418

TLV	(ACGIH)	10 mg/m3	TWA
AEL *	(DUPONT)	10 mg/m3	8 & 12 hr. TWA Total dust.
AEL *	(DUPONT)	5 mg/m3	8 & 12 hr. TWA Respirable 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, granular
Color	: light tan
Odor	: slight
pH	: 6.2 - 7.2
Bulk density	: 0.6 - 0.7 g/ml

**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**

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Inhalation 4 h LC50	: > 5.04 mg/l , rat



**DuPont™ Resolve® Q Herbicide**

Version 2.0

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Rimsulfuron	Dermal LD50 : > 2,000 mg/kg , rat Oral LD50 : 1,611 mg/kg , rat Skin irritation : No skin irritation, rat Eye irritation : Moderate eye irritation, rabbit Sensitisation : Causes sensitisation., guinea pig Further information : Information given is based on data on the components. Repeated dose toxicity : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.  Oral rat  altered blood chemistry, Liver effects, Organ weight changes  Carcinogenicity : Did not show carcinogenic effects in animal experiments. 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.
Thifensulfuron methyl	Repeated dose toxicity : The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.  Oral - feed multiple species  Reduced body weight gain  Carcinogenicity : Animal testing did not show any carcinogenic effects.


**DuPont™ Resolve® Q Herbicide**

Version 2.0

Revision Date 05/31/2013

Ref. 130000043418

Mutagenicity	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects. Did not cause genetic damage in animals.
Reproductive toxicity	:	Animal testing showed no reproductive toxicity.
Teratogenicity	:	Did not show teratogenic effects in animal experiments. Animal testing showed effects on embryo-fetal development at levels equal to or above those causing maternal toxicity.
Isxadifen-ethyl		
Carcinogenicity	:	Animal testing did not show any carcinogenic effects.
Mutagenicity	:	Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
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.

**SECTION 12. ECOLOGICAL INFORMATION**

Aquatic Toxicity		
Rimsulfuron		
96 h LC50	:	Oncorhynchus mykiss (rainbow trout) > 390 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
Thifensulfuron methyl		
96 h LC50	:	Oncorhynchus mykiss (rainbow trout) > 100 mg/l




**DuPont™ Resolve® Q Herbicide**

Version 2.0

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Ref. 130000043418

14 d EC50	:	Lemna minor (duckweed) 0.0013 mg/l
48 h EC50	:	Daphnia magna (Water flea) 470 mg/l
Isxadifen-ethyl		
96 h LC50	:	Oncorhynchus mykiss (rainbow trout) 0.34 mg/l
96 h LC50	:	Lepomis macrochirus (Bluegill sunfish) 0.22 mg/l
72 h EC50	:	Pseudokirchneriella subcapitata (green algae) 1.26 mg/l
48 h	:	Daphnia magna (Water flea) 0.51 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.  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
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	Proper shipping name	: Environmentally hazardous substance, solid, n.o.s. (Isoxadifen-ethyl)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9MI
IMDG	UN number	: 3077
	Proper shipping name	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Isoxadifen-ethyl)
	Class	: 9
	Packing group	: III
	Labelling No.	: 9
	Marine pollutant	: yes (Isoxadifen-ethyl)

Not regulated by DOT/49 CFR unless shipped in bulk package or by water.

**SECTION 15. REGULATORY INFORMATION**

SARA 313 Regulated Chemical(s) : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

EPA Reg. No. : 352-777  
 In the United States this product is regulated by the US Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Kaolin , Sucrose , Disodium hydrogen orthophosphate

**SECTION 16. OTHER INFORMATION**

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



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® Registered trademark of E.I. du Pont de Nemours and Company

Contact person : DuPont Crop Protection, Wilmington, DE, 19898, Phone: 1-888-638-7668

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