



The MSDS format adheres to the standards and regulatory requirements of the United States and may not meet regulatory requirements in other countries.

DuPont
Material Safety Data Sheet

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M0000702 "DuPont" "Resolve" Q (mp) Herbicide
Revised 18-DEC-2007

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"Resolve" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

Tradenames and Synonyms

DPX-QFU30
B12578340

Company Identification

MANUFACTURER/DISTRIBUTOR
DuPont
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

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

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
RIMSULFURON (N-[[[(4,6-dimethoxy-2-pyrimidinyl)amino]carbonyl] -3-(ethylsulfonyl)-2- pyridinesulfonamide)	122931-48-0	18.4
THIFENSULFURON METHYL Methyl 3-[[[[[(4-methoxy-6-methyl-1,3,5-triazin-2- yl)amino]carbonyl]amino]- sulfonyl-2- thiophenecarboxylate	79277-27-3	4
ISOXADIFEN-ETHYL	163520-33-0	9.2
OTHER INGREDIENTS		68.4

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Causes moderate eye irritation. Harmful if swallowed or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

Potential Health Effects

Based on animal data, eye contact with may cause eye irritation with discomfort, tearing, or blurring of vision.

Based on animal data, prolonged overexposures by ingestion or inhalation may cause abnormal liver function as detected by laboratory tests.

Based on animal data, inhalation may cause irritation of the upper respiratory passages, with coughing and discomfort.

Carcinogenicity Information

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

FIRST AID MEASURES

First Aid

IF IN EYES: 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.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything to an unconscious person.

IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.

(FIRST AID MEASURES - Continued)

Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

FIRE FIGHTING MEASURES

Flammable Properties

Not a fire or explosion hazard.

Extinguishing Media

Water, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Evacuate personnel to a safe area. Wear self-contained breathing apparatus. Wear full protective equipment. Use water spray. Runoff from fire control may be a pollution hazard.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

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

Initial Containment

Dike spill. Prevent material from entering sewers, waterways, or low areas.

Spill Clean Up

Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Wash clothing after use. Avoid breathing dust. Avoid breathing mist.

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

(HANDLING AND STORAGE - Continued)

Remove clothing immediately if pesticide gets inside.
Then wash thoroughly and put on clean clothing.

Storage

Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical-resistant category selection chart.

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 14 mils.

Shoes plus socks.

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

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 14 mils.

Shoes plus socks.

Exposure Guidelines

Applicable Exposure Limits

RIMSULFURON

PEL (OSHA)	: None Established
TLV (ACGIH)	: None Established
AEL * (DuPont)	: 5 mg/m ³ , 8 & 12 Hr. TWA, total dust

THIFENSULFURON METHYL

(Applicable Exposure Limits - Continued)

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 5 mg/m³, 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.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Form : Solid, granular
Odor : Faint
Color : Light Tan

Part A:

Bulk Density: 0.67 - 0.77 g/mL
pH : 6.7 - 7.7

Part B:

Bulk Density: 0.68 g/mL
pH : 6.5

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Based on components:

Oral LD50: 1,611 mg/kg (rat)
Dermal LD50: > 2000 mg/kg (rats)
Inhalation 4-hr LC50: > 5.04 mg/L (rat)

Based on data from components, this product is a moderate eye irritant, a skin sensitizer, but is not a skin irritant in animals.

(TOXICOLOGICAL INFORMATION - Continued)

RIMSULFURON TECHNICAL

Repeated and long-term ingestion exposures in animals with Rimsulfuron resulted in non-specific body weight, organ weight, and mild hematologic and clinical chemistry changes. A 1-year feeding study in dogs resulted in mild tracheal effects.

Rimsulfuron did not demonstrate carcinogenic effects in long-term feeding studies in rats or mice. Rimsulfuron did not cause developmental or reproductive effects in animals. Rimsulfuron did not produce genetic damage in bacterial or mammalian cell cultures or in animals.

THIFENSULFURON METHYL TECHNICAL

Repeated ingestion exposures to Thifensulfuron Methyl caused decreased body and organ weights, and some blood chemistry changes, including increased blood urea nitrogen and decreased protein and globulins. Long-term exposures caused an increase in liver weights, decreased body weight gain, and a decreased level of sodium in the blood when compared to the control group.

No carcinogenic effects were observed in animal tests with Thifensulfuron Methyl. Animal data show developmental effects only at exposure levels producing toxic effects in the adult animal. Tests in animals demonstrate no reproductive toxicity. Thifensulfuron Methyl does not produce genetic damage in bacterial or mammalian cell cultures or animals.

ISOXADIFEN-ETHYL TECHNICAL

Long term testing does not indicate carcinogenic effects. There was no indication of developmental toxicity in animal tests. Ingestion of excessive amounts by pregnant animals did cause maternal and fetal toxicity.

Isoxadifen Ethyl was not mutagenic in vitro or in vivo during genetic testing.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

RIMSULFURON

96 hour LC50 - Rainbow trout: > 390 mg/L.
96 hour LC50 - Bluegill sunfish: > 390 mg/L.
48 hour EC50 - Daphnia magna: > 360 mg/L.
72 hour, EC50, Freshwater algae: 1.6 mg/L.

AVIAN TOXICITY:

RIMSULFURON

Acute Oral LD50 - Bobwhite Quail: > 2250 mg/kg.

(ECOLOGICAL INFORMATION - Continued)

Acute Oral LD50 - Mallard Duck: > 2000 mg/kg.
Acute Dietary LC50 - Bobwhite Quail: > 5620 ppm.
Acute Dietary LC50 - Mallard Duck: > 5620 ppm.

AQUATIC TOXICITY:

THIFENSULFURON METHYL

96 hour LC50 - Rainbow trout: > 100 mg/L.
96 hour LC50 - Bluegill sunfish: > 100 mg/L.
96 hour EC50 - Freshwater algae: 0.840 - 1.03 mg/L.

AVIAN TOXICITY:

Acute Oral LD50 - Mallard Duck: > 2510 mg/kg.
Acute Dietary LC50 - Mallard Duck: > 5620 mg/kg.
Acute Dietary LC50 - Bobwhite Quail: > 5620 mg/kg

AQUATIC TOXICITY

ISOXADIFEN-ETHYL TECHNICAL

96-Hour LC50 - Rainbow trout: 0.34 mg/L
96-Hour LC50 - Bluegill sunfish: 0.22 mg/L
48-Hour EC50 - Daphnia magna: > 0.51 mg/L

DISPOSAL CONSIDERATIONS

Waste Disposal

Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations. Do not flush to surface water or sanitary sewer system.

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

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 by cleaning of equipment or disposal of equipment washwaters.

Container Disposal

Completely empty the contents of the bag into application equipment. Then, dispose of the bag in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO
Proper Shipping Name : NOT REGULATED

REGULATORY INFORMATION

U.S. Federal Regulations

In the United States this product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act. It is a violation of federal law to use this product in a manner inconsistent with its labeling.

EPA Reg. No. 352-759

OTHER INFORMATION

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS: DuPont Crop Protection
Address : Wilmington, DE 19898
Telephone : 1-888-638-7668

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS