
ULTIM 75 DF HERBICIDE
GPA00112 Revised 20-JUN-2011 Printed 20-JUN-2011

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

Corporate MSDS Number : DU008191

Tradenames and Synonyms

"ULTIM" 75 DF HERBICIDE

Company Identification

MANUFACTURER/DISTRIBUTOR

E.I. du Pont Canada Company
P.O. Box 2200
Streetsville
Mississauga, Ontario L5M 2H3

PHONE NUMBERS

Product Information : 1-800-387-2122
Medical Emergency : 1-800-441-3637 (24 hours)

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
RIMSULFURON N-((4,6-dimethoxypyrimidin-2-yl)aminocarbonyl)- 3-(ethylsulfonyl)-2- pyridinesulfonamide	122931-48-0	37.5 WT%
NICOSULFURON 2-[[(4,6-dimethoxypyrimidin-2-yl)- aminocarbonyl]aminosulfonyl]-N,N-dimethyl- 3- pyridinecarboxamide	111991-09-4	37.5 WT%
INERT INGREDIENTS		25 WT%

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION! Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.

(HAZARDS IDENTIFICATION - Continued)

Potential Health Effects

ANIMAL DATA:

ACUTE AND SUBCHRONIC STUDIES ("ULTIM"):

Oral LD50 (rat): >5,000 mg/kg. Very low toxicity.

Dermal LD50 (rabbit): >2,000 mg/kg. Slightly to moderately toxic.

Inhalation LC50 (rat): >5.6 mg/L. Very low toxicity.

Skin Irritation (rabbit): Slight to mild irritation. All effects were reversible.

Skin Sensitization (guinea pig): Not a sensitizer.

Eye irritation (rabbit): Direct contact with concentrated product produced irritation. Effects were reversible in 72 hours.

28-Day Rat Dietary Study was conducted with the technical materials. The no-observable-effect level was 3000 ppm with liver weight effects at 15,000 ppm.

CHRONIC STUDIES - RIMSULFURON:

2-Year Rat Study - Dietary concentrations were 0, 25, 300, 3,000 or 10,000 ppm. Rimsulfuron was not oncogenic. The No-Observable-Effect Level (NOEL) was 300 ppm for males and 3000 ppm for females. Reduced body weights and slightly elevated liver weights were observed at higher doses. There were no indications of abnormal liver functions or histology at these doses.

18-Month Mouse Study - Dietary concentrations were 0, 25, 250, 2,500, or 7,500 ppm. Rimsulfuron was not oncogenic. The NOEL was 2,500 ppm. Reduced body weights and slight increases in the age-related incidences of cataracts and histological changes in the testis normally observed in this strain of mouse were observed at the high dose.

1-Year Dog Study - Dietary concentrations were 0, 50, 2,500 and 10,000 ppm. The NOEL was 50 ppm. Reduced body weights, clinical chemistry changes and increased liver and kidney weights were observed at the higher doses. There were no indications of abnormal histology in these organs. Minimal to mild microscopic effects in the trachea and/or testes were also observed in some but not all dogs at the two higher doses.

SPECIAL STUDIES - RIMSULFURON:

(HAZARDS IDENTIFICATION - Continued)

REPRODUCTION - 2-Generation Reproduction Study in Rats: Dietary concentrations were 0, 50, 3,000 and 15,000 ppm. Rimsulfuron did not effect fertility or reproductive performance. The NOEL was 3,000 ppm. Reduced food consumption and efficiency and reduced body weights were observed at the high dose.

TERATOGENICITY - Rat Study: Rimsulfuron was administered by oral intubation at 0, 200, 700, 2,000 and 6,000 mg/kg body weight. Rimsulfuron was not teratogenic. The NOEL for the dam was 2,000 mg/kg and 6,000 mg/kg for the conceptus. Reduced maternal food consumption and body weights were observed at the high dose.

Rabbit Study: Rimsulfuron was administered by oral intubation at 0, 25, 170, 500 and 1,500 mg/kg body weight. Rimsulfuron was not teratogenic. The NOEL was 170 mg/kg for the dam and 500 mg/kg for the conceptus. Reduced material food consumption and/or survival were observed at the higher levels.

MUTAGENICITY/GENETIC TOXICITY - Rimsulfuron was not genotoxic in the following assays: AMES assay; mutagenicity test in Chinese Hamster Ovary Cells (CHO/HGPRT); unscheduled DNA synthesis in rat hepatocytes; chromosomal aberration test in human lymphocytes; and in vivo mouse micronucleus assay.

CHRONIC STUDIES - NICOSULFURON:

Nicosulfuron was tested for chronic toxicity and oncogenicity in rats fed diets that contained 0, 50, 1500, 7500 and 20000 ppm for two years. This study was negative with respect to compound-related chronic effects including oncogenicity at the highest dose tested. The NOEL for the rat was therefore 20000 ppm.

An oncogenicity study was conducted in mice fed diets that contained nicosulfuron at concentrations of 0, 25, 250, 2500 and 7500 ppm for 18 months. Nicosulfuron was non-oncogenic and there was also no compound-related chronic toxicity observed in this study. A previous 90-day test in mice resulted in equivocal effects on circulating neutrophils and monocytes at 7500 and 10000 ppm. The apparent reduction in circulating cell counts was attributed to margination of these cells in capillaries rather than their increased destruction or reduced production. This effect was not observed in the chronic mouse study nor in other species.

SPECIAL STUDIES - NICOSULFURON:

MUTAGENICITY/GENETIC TOXICITY - Nicosulfuron was negative in each of five tests to determine its potential to produce

(HAZARDS IDENTIFICATION - Continued)

mutagenic and genotoxic effects. These tests include: Ames and in vitro cytogenetics in human lymphocytes; mouse micronucleus assay; and unscheduled DNA synthesis in rat hepatocytes.

REPRODUCTION AND DEVELOPMENT STUDIES - A 2-generation reproduction study was conducted in rats with dietary nicosulfuron concentrations of 0, 250, 5000 and 20000 ppm. There were no effects on fertility, lactation indices or offspring health at the high dose. The NOEL was 5000 ppm based on reduced maternal weight gain and fewer offspring per litter at 20000 ppm. Effects at the high dose were considered minimal.

In studies to assess teratogenicity and developmental toxicity, nicosulfuron was non-teratogenic and was not uniquely toxic to the unborn. In the rat study, the NOEL for maternal and fetotoxicity was 6,000 mg/kg body weight/day, the highest dose tested. For the rabbit, the NOELs for maternal and fetotoxicity were 100 and 500 mg/kg/day, respectively.

HUMAN HEALTH EFFECTS:

Inhalation - Excessive exposure to dust may cause nasal and respiratory irritation.

Skin Contact - May cause skin irritation with discomfort or rash.

Eye Contact - May cause irritation with discomfort, tearing, or blurring of vision.

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.

(FIRST AID MEASURES - Continued)

IF INHALED: No specific intervention is indicated, as the compound is not likely to be hazardous by inhalation. Consult a physician if necessary.

IF INGESTED: No specific intervention is indicated, as the compound is not likely to be hazardous by ingestion. Consult a physician if necessary.

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

The material poses no explosion hazard in granular form.

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. 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

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

Spill Clean Up

Shovel or sweep up. Avoid causing dust.

HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with eyes, skin or clothing. Avoid breathing dust. Wash thoroughly after handling. Wash contaminated clothing prior to reuse.

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Handling (Physical Aspects)

Avoid dust generation.

Storage

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

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation.

Personal Protective Equipment

Always follow the label instructions when handling this product.

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) greater than or equal to 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

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

rubber) greater than or equal to 14 mils.

Exposure Guidelines

Applicable Exposure Limits

RIMSULFURON

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 5 mg/m³, 8 & 12 Hr. TWA, total dust

NICOSULFURON

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 5 mg/m³, 8 & 12 Hr. TWA, respirable dust
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.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Solubility in Water : Dispersible
pH : 6 (1% wt/wt in H₂O)
Form : Solid granules
Color : Off-white
Odor : Faint.

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions. Avoid contact with heat, sparks and flame.

Incompatibility with Other Materials

None reasonably foreseeable.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

See Potential Health Effects section

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY - RIMSULFURON:

Tests indicate this material is practically non-toxic to the following:

96 Hour LC50, Rainbow trout : >390 mg/L
96 Hour LC50, Bluegill sunfish: >390 mg/L
48 Hour EC50, Daphnia magna : >360 mg/L

ENVIRONMENTAL TOXICITY - RIMSULFURON:

Oral (gavage) LD50 Bobwhite quail : >2250 mg/kg
Oral (gavage) LD50 Mallard duck : >2000 mg/kg
Oral (dietary) LC50 Bobwhite quail: >5620 ppm
Oral (dietary) LC50 Mallard duck : >5620 ppm

AQUATIC TOXICITY - NICOSULFURON:

Tests indicate this material is practically non-toxic to the following:

96 Hour LC50, Bluegill sunfish: >1000 MG/L
96 Hour LC50, Rainbow trout : >1000 mg/L
48 hour EC50, Daphnia magna : >1000 mg/L

ENVIRONMENTAL TOXICITY - NICOSULFURON:

Oral LD50, Bobwhite quail : >2250 mg/kg
Dietary LC50, Bobwhite quail: >5620 ppm
Dietary LC50, Mallard duck : >5620 ppm

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.

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

(DISPOSAL CONSIDERATIONS - Continued)

Product Disposal: Do not contaminate water, food or feed by disposal.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment rinsewater. Do not apply where/when conditions could favor runoff. Do not apply if a severe storm is expected within 24 hours.

Container Disposal

For Plastic Containers: Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

For Fiber Sacks: Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Dispose of bags at an approved waste disposal facility, in accordance with Federal, state and local regulations.

For Fiber Drums with Liners: Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by state and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner.

For Bags Containing Water-Soluble Packets: Do not reuse the outer box or the resealable plastic bag. When all water-soluble packets are used, the outer packaging should be clean and may be disposed of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by open burning. If burned, stay out of smoke. If the resealable plastic bag contacts the formulated product in any way, the bag must be triple-rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer wrap as described above.

For Metal Containers (non aerosol): Triple rinse (or equivalent) the container. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

TRANSPORTATION INFORMATION

Shipping Information

DOT/IMO
Proper Shipping Name : NOT REGULATED

Shipping Information -- Canada

This material is Not Regulated.

REGULATORY INFORMATION

U.S. Federal Regulations

EPA Reg. No. 352-572

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes
Chronic : No
Fire : No
Reactivity : No
Pressure : No

Canadian Regulations

Regulated under the Pest Control Products Act--WHMIS Exempt

Registration No. 24736 Pest Control Products Act

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating
Health : 1
Flammability : 1
Reactivity : 0

NPCA-HMIS Rating
Health : 1
Flammability : 1
Reactivity : 0

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 : Agricultural Products
E.I. du Pont Canada Company

GPA00112

DuPont
Material Safety Data Sheet

Page 11

(Continued)

Address : Box 2300, Streetsville
Mississauga, Ontario, L5M 2H3
Telephone : 1-800-667-3925

End of MSDS