



Du Pont
Material Safety Data Sheet

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"DuPont" "Landmark" XP Herbicide
M0000620 Revised 12-FEB-2009

Substance ID :130000029429

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"LANDMARK", "OUST", "TELAR" are registered trademarks of DuPont.

"DuPont" is a trademark of DuPont.

Tradenames and Synonyms

LANDMARK XP
OUST XP
TELAR DF
DPX-JHV52
B12038440

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	%
OUST XP		
(Sulfometuron Methyl)	74222-97-2	50.00
(Methyl 2-[[[(4,6-dimethyl-2-pyrimidinyl)- amino]carbonyl]amino]sulfonyl]benzoate)		
*TELAR DF		
(Chlorsulfuron)	64902-72-3	25.00
[2-Chloro-N[(4-methoxy-6-methyl-1,3,5,-triazin- 2yl)aminocarbonyl] benzenesulfonamide		
INERT INGREDIENTS		25.00

* Disclosure as a toxic chemical is required under Section 313 of

Printed on 02/16/2009

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Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

HAZARDS IDENTIFICATION

Emergency Overview

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

Potential Health Effects

Based on animal data from components, eye contact with DuPont
Landmark XP may cause eye irritation with discomfort, tearing, or
blurring of vision.

Based on animal data of one of the components, ingestion of DuPont
Landmark XP may lead to red blood cell destruction.

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

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 INHALED: No specific intervention is indicated as the
product is not likely to be hazardous by inhalation.
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

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may also contact 1-800-441-3637 for emergency medical treatment information.

FIRE FIGHTING MEASURES

Flammable Properties

Flammable limits in Air, % by Volume
LEL : 0.092 g/L

Not a fire or explosion hazard.

Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

Extinguishing Media

Water Spray, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

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

If area is exposed to fire and conditions permit, let fire burn itself out. Burning chemicals may produce by-products more toxic than the original material. If product is on fire, wear self-contained breathing apparatus and full protective equipment. Use water spray. Control runoff.

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.

Emergency Response - Chemical resistant coveralls, waterproof gloves, waterproof boots and face/eye protection. If dusting occurs, use NIOSH approved respirator protection.

Initial Containment

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

Follow applicable Federal, State/Provincial and Local laws/regulations.

Spill Clean Up

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Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)

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

Do not get in eyes. Avoid breathing dust, vapors or mist. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Wash clothing after use. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material.

Handling (Physical Aspects)

Avoid dust generation. Keep away from heat, sparks and flames.

Storage

Store product in original container only. Do not contaminate water, food or feed by storage.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

Personal Protective Equipment

Always follow the label instructions when handling this product.

No PPE is specified; however, avoid contact with skin, eyes and clothing.

Use of Landmark XP Herbicide on non-crop sites is not within the scope of the Worker Protection Standard. Do not enter or allow others to enter the treated area until sprays have dried.

Exposure Guidelines

Applicable Exposure Limits

OUST XP

PEL (OSHA)	: None Established
TLV (ACGIH)	: 5 mg/m ³ , 8 Hr. TWA, A4
AEL * (DuPont)	: 10 mg/m ³ , 8 & 12 Hr. TWA total dust

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TELAR DF

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL * (DuPont) : 10 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

Oust XP (Sulfometuron Methyl)

Solubility in water : Dispersible
Odor : None
Form : Solid
Color : Off-white
Bulk density (Loose) : 33 lb/cu ft
Bulk density (Packed) : 39 lb/cu ft

Telar DF (Chlorsulfuron)

Solubility in water : Dispersible
pH : 4.5 @ 1% suspension
Odor : None
Form : Solid
Color : Tan
Specific gravity : 0.69 @ 250C (770F)
Density : 0.64 - 0.74 g/mL

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Decomposition

Decomposition will not occur.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

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Oust XP

Inhalation 4 hour LC50: > 5.3 mg/L in rats
Skin absorption LD50 : > 5000 mg/kg in rabbits
Oral LD50 : > 5000 mg/kg in rats

Oust XP is a slight to mild skin irritant, and a mild eye irritant, but is not a skin sensitizer in animals.

Single inhalation exposure with Oust XP (Sulfometuron Methyl 75%) in rats caused slight to moderate body weight loss, nas and ocular discharge, and other nonspecific effects.

Single high oral doses of Oust XP (Sulfometuron Methyl 75%) produced no clinical signs of toxicity and no lesions were observed during pathological examination of tissue.

SULFOMETURON METHYL

Repeated exposures to high doses resulted in decreased body weight gain, liver changes, red blood cell hemolysis, and altered white blood cell counts. Long-term exposure caused mild hemolytic anemia, decreased body weight, alteration of clinical chemical parameters, and changes in the bile duct.

Animal testing indicates that Sulfometuron Methyl does not have carcinogenic effects. Developmental toxicity was observed but only at maternally toxic dose levels. In a two generation rat reproduction study, decreased numbers of pups were observed at the 5000 ppm level, a dose that was also maternally toxic. No reproductive effects were observed at 500 ppm.

Sulfometuron Methyl does not produce genetic damage in bacterial or mammalian cell cultures.

Telar DF Herbicide

Oral LD50 : > 2000 mg/kg in rats
Skin Absorption LD50 : > 5000 mg/kg in rats
Inhalation 4 hour LC50: > 5.5 mg/L in rats
(Chlorsulfuron)

Telar DF Herbicide is a mild reversible skin irritant, and a very mild eye irritant, and is not a skin sensitizer in animals.

CHLORSULFURON

The effects in animals from repeated exposures by inhalation to Chlorsulfuron include decreased weight gain, reversible kidney and spleen effects, and bone marrow changes.

Repeated oral dosing caused decreased weight gain, and hematological and clinical chemistry changes. Long-term

dosing resulted in decreased body weight gain, and slight

hematological changes.

Not carcinogenic in mice and female rats; a slight increase in Leydig cell tumors was observed in male rats after lifetime exposure at high doses.

Animal testing indicates that Chlorsulfuron did not show reproductive effects. Developmental toxicity has been observed but only at maternally toxic dose levels.

Chlorsulfuron did not produce genetic damage in bacterial and mammalian cell cultures. It did not produce heritable genetic damage.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:

(Sulfometuron Methyl)

48 hour NOEC - Daphnia magna: > 150 mg/L.

96 hour LC50 - Rainbow trout: > 148 mg/L.

96 hour LC50 - Bluegill sunfish: > 150 mg/L.

AVIAN TOXICITY:

(Sulfometuron Methyl)

Acute Dietary LC50 - Mallard Duck: > 5000 ppm.

Acute Dietary LC50 - Bobwhite Quail: > 5620 ppm.

AQUATIC TOXICITY:

(Chlorsulfuron)

96 hour LC50 - Sheepshead minnow: > 980 mg/L.

96 hour LC50 - Bluegill sunfish: > 128 ppm.

96 hour LC50 - Rainbow trout: > 122 ppm.

48 hour EC50 - Daphnia magna: > 112 ppm.

AVIAN TOXICITY:

(Chlorsulfuron)

Acute Oral LD50 - Mallard Duck: > 5000 mg/kg.

Acute Oral LD50 - Bobwhite Quail: > 5000 mg/kg > 112 ppm.

Aquatic Toxicity

Chlorsulfuron

120 hour EC50, Freshwater algae: 0.05 ppm.

Avian Toxicity

Chlorsulfuron

Short term Dietary LC50 - Mallard Duck: > 5000 ppm

Short term Dietary LC50 - Bobwhite Quail: > 5620 ppm

DISPOSAL CONSIDERATIONS

Waste Disposal

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Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

Do not contaminate water supply, food or feed by storage or disposal.

Wastes 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

For Plastic Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or 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 manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration if allowed by State and local authorities.

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 Paper and Plastic Bags: Completely empty bag into application equipment. Then dispose of empty 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

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TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

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

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. 352-645

State Regulations (U.S.)

*****ATTENTION*****

CALIFORNIA PROPOSITION 65

THIS PRODUCT CONTAINS CHLORSULFURON, A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating
Health : 1
Flammability : 1
Reactivity : 0

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

Personal Protection rating to be supplied by user depending on use conditions.

(Continued)

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

Indicates updated section.

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