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

DUPONT "OUSTAR" HERBICIDE
M0000436 Revised 23-APR-2007

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"OUSTAR" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

Tradenames and Synonyms

OUST XP/VELPAR DF BLEND
DPX-GH427
HEXAZINONE
SULFOMETURON METHYL

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	%
*HEXAZINONE [3-cyclohexyl-6-(dimethylamino)-1-methyl-1,3,5-triazine-2,4(1H,3H)-dione]	51235-04-2	63.2
SULFOMETURON METHYL {Methyl 2-[[[[(4,6-dimethyl-2-pyrimidinyl) amino]-carbonyl]amino] sulfonyl]benzoate}	74222-97-2	11.8
INERT INGREDIENTS		25

* Disclosure as a toxic chemical is required under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

HAZARDS IDENTIFICATION

Emergency Overview

DANGER! CAUSES EYE DAMAGE.

Corrosive, causes irreversible eye damage. Harmful if swallowed. Do not get in your eyes or on clothing. Wash thoroughly with soap and water after handling.

Potential Health Effects

Based on animal data from the active ingredients, eye contact with Oustar may cause eye corrosion or ulceration.

Based on animal data, skin contact with Oustar may cause skin irritation with discomfort or rash.

Based on animal data, ingestion of high doses of Sulfometuron Methyl may lead to red blood cell destruction.

Ingestion of Hexazinone may cause abnormal liver function as detected by laboratory tests.

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 do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

(FIRST AID MEASURES - Continued)

Notes to Physicians

Probable mucosal damage may contraindicate the use of gastric lavage.

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

Use media appropriate for surrounding material.

Fire Fighting Instructions

Evacuate personnel to a safe area. Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus. Wear full protective equipment. 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.

(ACCIDENTAL RELEASE MEASURES - Continued)

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

Spill Clean Up

Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)

Do not get in eyes. Avoid breathing dust. Avoid contact with skin. Avoid contact with clothing.

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

Handling (Physical Aspects)

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

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

Engineering Controls

Use only with adequate ventilation.

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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 made of any waterproof material.
- Shoes plus socks.
- Protective eye wear.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE 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 made of any waterproof material.
- Shoes plus socks
- Protective eye wear.

Exposure Guidelines

Applicable Exposure Limits

HEXAZINONE

PEL	(OSHA)	: None Established
TLV	(ACGIH)	: None Established
AEL *	(DuPont)	: 10 mg/m3, 8 Hr. TWA

SULFOMETURON METHYL

PEL	(OSHA)	: None Established
TLV	(ACGIH)	: 5 mg/m3, 8 Hr. TWA, A4
AEL *	(DuPont)	: 10 mg/m3, 8 & 12 Hr. TWA total 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

Form	: Dispersible Granules.
Color	: Tan.
pH	: 7 (1 % SOLUTION)
Density	: 35 lb/cu ft

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Incompatibility with Other Materials

None reasonably foreseeable.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Oustar
Oral LD50: 2073 mg/kg, male rats (Slightly toxic)
Oral LD50: 1421 mg/kg, female rats (Slightly toxic)

Oustar is a moderate skin irritant in tests on animals.

Velpar DF (75% Hexazinone)
Dermal LD50: > 5000 mg/kg in rabbits
Inhalation 4 hour LC50: > 5.2 mg/L in rats

Animal testing indicates Velpar DF is an eye corrosive, but is not a skin sensitizer in animals.

Oust XP (Sulfometuron Methyl 75%)
Dermal LD50: > 5000 mg/kg in rabbits
Inhalation 4 hour LC50: > 5.3 mg/L in rats

HEXAZINONE
Repeated skin applications indicated no irritation or systemic activity.

Repeated dosing by ingestion of excessive dietary levels of Hexazinone resulted in weight loss, alterations in liver weights alterations in blood chemical measurements, and alterations in enzyme activities. No evidence of pathological organ damage was observed. Long-term dosing produced decreased weight gain, alterations in hematology, clinical chemistry, and blood enzyme levels, increased liver weights in some species, and pathological liver changes.

Animal data showed that chronic, excessive dietary exposure to Hexazinone produced a slight, equivocal increase in liver tumors in female mice.

(TOXICOLOGICAL INFORMATION - Continued)

Animal data show developmental effects only at exposure levels producing other toxic effects in the adult animal. Animal testing indicates Hexazinone does not have reproductive effects. The weight of evidence from a battery of cell culture and laboratory animal tests indicates Hexazinone does not cause genetic toxicity.

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

Single high oral doses of Oust (Sulfometuron Methyl 75%) produced no clinical signs of toxicity and no lesions were observed during pathological examination of tissue. Repeated oral studies with the active ingredient, Sulfometuron Methyl, caused 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.

Oust (Sulfometuron Methyl 75%) administered in single high dermal doses caused temporary severe to slight skin irritation and sporadic weight loss.

Animal testing indicates that the active ingredient, Sulfometuron Methyl, does not have carcinogenic effects. In a two generation rat reproduction study with the active ingredient, Sulfometuron Methyl, 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 did not produce developmental toxicity when tested in animals. Sulfometuron methyl did not produce genetic damage in bacterial or mammalian cell cultures.

ECOLOGICAL INFORMATION

Ecotoxicological Information

AQUATIC TOXICITY:
HEXAZINONE
96 hour LC50 - Fathead minnows: 274 mg/L.
96 hour LC50 - Bluegill sunfish: > 370 ppm.
96 hour LC50 - Rainbow trout: > 320 ppm.

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:
HEXAZINONE

(ECOLOGICAL INFORMATION - Continued)

Acute Dietary LC50 - Mallard Duck: > 5000 ppm.
Acute Dietary LC50 - Bobwhite Quail: > 5000 ppm.

AVIAN TOXICITY:
SULFOMETURON METHYL
Acute Dietary LC50 - Mallard Duck: > 5000 ppm.
Acute Dietary LC50 - Bobwhite Quail: > 5620 ppm.

DISPOSAL CONSIDERATIONS

Waste Disposal

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. 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.

ENVIRONMENTAL HAZARDS
Do not apply directly to water, or areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

The active ingredient, hexazinone, in this product is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination.

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 liners 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

(DISPOSAL CONSIDERATIONS - Continued)

the 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.

Container Refilling and Disposal (For Containers up to 250 gal): Refer to the product label. If the container is to be refilled, do not rinse with any material or introduce any pesticide other than this product.

Container Disposal for Bulk Containers: Refer to the product label. The container must only be refilled with this pesticide product. DO NO REUSE THE CONTAINER FOR ANY OTHER PURPOSE.

Do not transport if the container is damaged or leaking. Disposal of the container must be in compliance with State and local regulations

For minor spills, leaks, etc., follow all precautions indicated on the product label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

TRANSPORTATION INFORMATION

Shipping Information

DOT
Proper Shipping Name : AGRICULTURAL HERBICIDE, SOLID
NOT REGULATED

REGULATORY INFORMATION

U.S. Federal Regulations

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

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

(REGULATORY INFORMATION - Continued)

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. 352-603

OTHER INFORMATION

NFPA, NPCA-HMIS

NFPA Rating
Health : 2
Flammability : 1
Reactivity : 0

NPCA-HMIS Rating
Health : 2
Flammability : 1
Reactivity : 0

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

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.

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