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DuPont  
Material Safety Data Sheet

Page 1

M0000380 "DuPont" "CANOPY XL" HERBICIDE  
Revised 9-FEB-2004

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"CANOPY XL" is a registered trademark of DuPont.

"DuPont" is a trademark of DuPont.

Corporate MSDS Number : DU008252

# Tradenames and Synonyms

DPX-MP559  
MP559

Tradenames and Synonyms (Remarks)

"CANOPY" is a trademark of DuPont.

"AUTHORITY" is a trademark of FMC Corporation.

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	%
SULFENTRAZONE	122836-35-5	46.9
N-[2,4-DICHLORO-5-[4-(DIFLUOROMETHYL)-4,5-DIHYDRO-3-METHYL-5-OXO-1H-1,2,4-TRIAZOL-1-YL]PHENYL]METHANESULFONAMIDE		
*CHLORIMURON ETHYL	90982-32-4	9.4
ETHYL 2-[[[(4-CHLORO-6-METHOXYPYRIMIDIN-2-YL)AMINO]CARBONYL]AMINO]SULFONYL]BENZOATE		
INERT INGREDIENTS		43.7
*TOLUENE	108-88-3	
Formulation may include <1.7% Toluene		

## (COMPOSITION/INFORMATION ON INGREDIENTS - Continued)

\* 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.

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HAZARDS IDENTIFICATION  
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## Emergency Overview

## CAUTION!

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes moderate eye irritation. Harmful if swallowed, inhaled, or absorbed through skin. Avoid breathing dust, vapor or spray mist. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

## Potential Health Effects

Based on animal tests, eye contact with Canopy XL may cause eye irritation with tearing, pain, or blurred vision.

Skin contact with Canopy XL may cause irritation of the skin with itching, redness or rash. Skin permeation may occur from Toluene in amounts capable of producing systemic toxicity.

Based on animal tests, repeated or excessive overexposure to Canopy XL by ingestion may cause abnormal liver function with altered enzyme levels in blood, or red blood cell destruction with anemia.

Ingestion of Toluene may cause irritation of the digestive tract with stomach pain, heartburn, nausea, vomiting or diarrhea; however there may be no symptoms at all. The major ingestion hazard is aspiration (liquid entering the lungs during ingestion or vomiting) which may result in "chemical pneumonia". Symptoms include coughing, gasping, choking, shortness of breath, bluish discoloration of the skin, rapid breathing and heart rate, and fever. Pulmonary edema or bleeding, drowsiness, confusion, coma and seizures may occur in more serious cases. Symptoms may develop immediately or as late as 24 hours after exposure, depending on how much chemical entered the lungs.

Repeated and/or prolonged inhalation or ingestion exposure to Toluene may cause abnormal liver or kidney function with altered results on blood tests; irregular heart beat with a strange sensation in the chest, "heart thumping", apprehension, lightheadedness, feeling of fainting, dizziness, weakness, sometimes progressing to loss of consciousness and death; low blood pressure; and fatality from gross overexposure.

## (HAZARDS IDENTIFICATION - Continued)

Inhalation exposure to Toluene may cause irritation of the nose and throat with sneezing, sore throat or runny nose, headache, nausea and weakness; and central nervous system depression with dizziness, confusion, incoordination drowsiness or unconsciousness.

Increased susceptibility to the effects of overexposure to Canopy XL may be observed in persons with pre-existing disease of the liver, or hematological system.

## 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.

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FIRST AID MEASURES  
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## First Aid

## INGESTION:

IF SWALLOWED: Call 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.

## EYE CONTACT:

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.

## INHALATION:

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

## SKIN CONTACT:

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.

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.

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FIRE FIGHTING MEASURES  
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## Flammable Properties

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. Isolate area. Evacuate personnel to a safe area. 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.

If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated.

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ACCIDENTAL RELEASE MEASURES  
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## 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.

## Spill Clean Up

Shovel or sweep up. Avoid causing dust.

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HANDLING AND STORAGE  
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## Handling (Personnel)

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.

Avoid breathing vapors or mist. Avoid breathing dust. 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, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place. Do not use or store near heat, sparks or open flame.

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EXPOSURE CONTROLS/PERSONAL PROTECTION  
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## Engineering Controls

Use only with adequate ventilation. Keep container tightly closed.

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

## # 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 the EPA chemical resistance 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) equal to or greater than 14 mils.  
Shoes plus socks.

## (EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

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, 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 over long-sleeved shirt and long pants.  
Chemical Resistant Gloves Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all equal to or greater than 14 mils.  
Shoes plus socks.

## Exposure Guidelines

## Applicable Exposure Limits

## SULFENTRAZONE

AEL \* (DuPont) : 2 mg/m<sup>3</sup>, 8 & 12 Hr. TWA, total dust

## CHLORIMURON ETHYL

PEL (OSHA) : None Established

TLV (ACGIH) : None Established

AEL \* (DuPont) : 10 mg/m<sup>3</sup>, 8 & 12 Hr. TWA, total dust  
5 mg/m<sup>3</sup>, 8 & 12 Hr. TWA, respirable dust

## TOLUENE

PEL (OSHA) : 200 ppm, 8 Hr. TWA  
300 ppm, Ceiling  
500 ppm - 10 Min. Max.

TLV (ACGIH) : 50 ppm, 188 mg/m<sup>3</sup>, 8 Hr. TWA, Skin, A4

AEL \* (DuPont) : 50 ppm, 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.

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PHYSICAL AND CHEMICAL PROPERTIES  
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## Physical Data

Solubility in Water : Dispersible  
pH : 6.8 (1% Solution)  
Odor : None  
Color : Tan  
Form : Granular

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STABILITY AND REACTIVITY  
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## 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.

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TOXICOLOGICAL INFORMATION  
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## Animal Data

## Canopy XL

Oral LD50:	3297 mg/kg in rats (Slightly toxic)
Inhalation LC50:	> 6.18 mg/L (Very low toxicity)

Canopy XL is a mild eye irritant in animal tests.

## CHLORIMURON ETHYL

Repeated applications of Chlorimuron Ethyl to the skin of rabbits for 21 days at doses of 100, 400, or 1000 mg/kg resulted in no significant toxicological effects. The NOEL for the study was 1000 mg/kg.

Repeated ingestion of Chlorimuron Ethyl by rats caused liver effects, anemia, and decreased body weight. Long-term ingestion exposure caused anemia, increased liver weight, altered clinical chemistry, and decreased body weight at the higher exposure levels.

In animal testing Chlorimuron Ethyl has not caused carcinogenicity. Exposure of pregnant rabbits caused developmental delays in the fetus at maternally toxic doses. However, studies in rats produced no evidence of developmental toxicity. Reproductive data in rats show nutritional and organ effects in offspring only at levels which produce other toxic effects in the adult animal. There were no effects on fertility or lactation indices in rats. Tests have shown that Chlorimuron Ethyl does not cause genetic damage in bacterial or mammalian cell cultures, or in animals.

## SULFENTRAZONE

## (TOXICOLOGICAL INFORMATION - Continued)

Repeated dosing with Sulfentrazone by ingestion produced altered hematology, tremors, increased spleen and liver weights, and microscopic liver changes.

Sulfentrazone did not produce any deaths from inhalation exposure to 4.13 mg/L of its dust.

In animal testing Sulfentrazone did not cause carcinogenicity.

Exposure of pregnant rats to Sulfentrazone produced developmental effects including reduced fetal body weights, delayed skeletal ossification, bone abnormalities, and increased resorptions. The maternal and fetal NOAELs via oral administration are 25 and 10 mg/kg/day, respectively. The maternal and fetal NOAELs for dermal administration were >250 and 100 mg/kg/day, respectively. Oral administration to rabbits resulted in developmental effects at maternally toxic doses, 250 and 375 mg/kg/day. The maternal and fetal NOAEL was 100 mg/kg/day. Reproductive tests show decreased litter size, decrease in growth and survival of offspring, and decrease in male fertility and histopathological changes of the male reproductive organs.

Tests in bacterial and mammalian cell cultures are generally negative.

## TOLUENE

Single dermal exposure to Toluene caused inflammation of the lungs, liver, and kidneys and reduced sperm count. Reduced sperm counts were not evident from other studies with varying concentrations and different routes of exposure.

Single ingestion exposure to high doses of Toluene caused reduced weight gain and non-specific effects such as malaise.

Single inhalation exposure to Toluene caused excessive activity; incoordination; and inactivity or anaesthesia. Repeated exposure to higher concentrations caused excessive activity; inactivity or anaesthesia; decreased response to sound; hypothermia; histopathological changes of the respiratory tract; and increased liver and kidney weight. Long-term exposure caused histopathological changes of the respiratory tract; decreased body weight; and increased liver weight.

One published study reports limited data suggesting long-term ingestion of 500 mg/kg of Toluene caused increased malignant tumors in rats. Other more extensive inhalation studies demonstrated no carcinogenic effects in animals. Animal data show developmental effects only at exposure levels producing other toxic effects in the adult animal. Reproductive data on rats exposed to Toluene show no change in reproductive performance. Repeated exposure to high doses caused decreased litter weight. Tests have shown that Toluene does not cause genetic damage in bacterial or mammalian cell cultures. It has produced genetic damage in tests on animals. In animal testing, Toluene has not



## (TOXICOLOGICAL INFORMATION - Continued)

caused permanent genetic damage in reproductive cells of mammals  
(has not produced heritable genetic damage).

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ECOLOGICAL INFORMATION  
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## Ecotoxicological Information

## AQUATIC TOXICITY:

## CHLORIMURON ETHYL

Low toxicity.

96 hour LC50 - Rainbow trout: &gt; 1,000 mg/L.

## SULFENTRAZONE

96 hour LC50 - Bluegill sunfish: 93.8 mg/L.

96 hour LC50 - Rainbow trout: &gt; 130 mg/L.

48 hour EC50 - Daphnia magna: 60.4 mg/L.

## TOLUENE

96 hour LC50 - Fathead minnows: 31.7 mg/L.

## AVIAN TOXICITY:

## CHLORIMURON ETHYL

LD50 - Mallard Duck: &gt; 2,510 mg/kg.

LC50 - Bobwhite Quail: &gt; 5,600 ppm.

## SULFENTRAZONE

Acute Dietary LC50 - Mallard Duck: &gt; 5,620 ppm.

Acute Dietary LC50 - Bobwhite Quail: &gt; 5,620 ppm

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DISPOSAL CONSIDERATIONS  
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## Waste Disposal

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water supply, food or feed by storage or disposal. Treatment, storage, transportation, and disposal must be in accordance with applicable Federal, state/provincial, and local regulations.

Pesticide or rinsate that cannot be used or chemically reprocessed must be disposed of according to applicable Federal, state or local procedures. Contact your state Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

## Environmental Hazards

This pesticide is toxic to marine/estuarine invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water

## (DISPOSAL CONSIDERATIONS - Continued)

mark. Drift and runoff may be hazardous to terrestrial and aquatic plants in neighboring areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

## Container Disposal

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.

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 Plastic Containers: Triple rinse (or equivalent). 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 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 the 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.

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TRANSPORTATION INFORMATION  
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## Shipping Information

DOT/IMO  
Proper Shipping Name : NOT REGULATED

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REGULATORY INFORMATION  
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## U.S. Federal Regulations

TITLE III HAZARD CLASSIFICATIONS SECTIONS 311, 312

Acute : Yes  
Chronic : Yes  
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. 352-589

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OTHER INFORMATION  
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## 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.

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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  
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