



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

Page 1

-----  
M0000354 DuPont "UPBEET" HERBICIDE  
Revised 7-NOV-2001  
-----

-----  
CHEMICAL PRODUCT/COMPANY IDENTIFICATION  
-----

Material Identification

"UPBEET" HERBICIDE is a registered trademark of DuPont.

DuPont is a trademark of DuPont.

Corporate MSDS Number : DU008226

# Tradenames and Synonyms

TRIFLUSULFURON METHYL  
DPX-66037

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	%
TRIFLUSULFURON METHYL (methyl 2-[[[[[4-(dimethylamino-6-(2,2,2-trifluoroethoxy)-1,3,5-triazin-2-yl]amino]-carbonyl]amino]sulfonyl]-3-methylbenzoate)	126535-15-7	50
INERT INGREDIENTS		50

-----  
HAZARDS IDENTIFICATION  
-----

## Potential Health Effects

CAUTION! Avoid contact with skin, eyes, and clothing.

## ANIMAL DATA:

Acute Oral - (rat) LD50 is > 5,000 mg/kg. Very low toxicity by ingestion.

Acute Dermal - (rabbit) LD50 is > 2,000 mg/kg. Very low toxicity by contact.

Inhalation - (rat) 4 hr LC50 is > 6.1 mg/L. Very low toxicity by inhalation.

Skin Irritation and Sensitization - Not a skin irritant; not a sensitizer.

Eye Irritation - Product produced mild to moderate conjunctival chemosis and redness, slight to mild iritis and corneal opacity. All positive effects cleared within 7 days.

## CHRONIC STUDIES: Triflusulfuron methyl

Chronic Feeding Study in Rats - Non-oncogenic in female rats. Increased incidence of Leydig cell adenomas were observed in males following chronic and excessive exposures at 750 and 1500 ppm. The NOELs for male and female rats were 100 and 750 ppm, respectively. These were based on increased adenomas and reduced circulating red cell mass among higher-dosed males and reduced body weights and increased incidence or severity of species- and age-specific effects among male and female rats at higher doses. There were no nervous system effects among rats specifically tested for these effects nor among other laboratory species.

18-Month Feeding Study in Mice - Dietary dose levels were 0, 10, 150, 2500 and 7000 ppm. The NOEL was 150 ppm based on decreases in mean body weight gain and liver effects at the higher dose levels.

1-Year Feeding Study in Dogs - Dietary dose levels were 0, 35, 875 and 3,500 ppm. The NOEL was 875 ppm based on clinical pathology alterations including liver weight increases, observations of slight anemia in the high dose group and centrilobular hepatocellular hypertrophy also in the high dose group.

Teratogenicity Studies - Triflusulfuron methyl was not a teratogen nor regarded as uniquely toxic to the conceptus following administration via oral intubation to pregnant rats at dose levels reaching 1,000 mg/kg/day or to rabbits

## (HAZARDS IDENTIFICATION - Continued)

at dose levels reaching 800 mg/kg/day. For rats, the NOEL was 120 mg/kg/day based on maternal and fetal toxicity at the 350 and 1,000 dose levels. For rabbits, the NOEL for dam was 15 mg/kg/day based on maternal toxicity at dose levels of 90 mg/kg/day and above, and > 800 mg/kg/day for the conceptus.

Reproductive Effects - Not a reproductive toxin. No compound-related effects on mating indices, fertility indices and gestation length were observed in a 2-generation study in rats receiving dietary doses of 0, 10, 100, 750 or 1,500 ppm. The NOEL was 100 ppm based on body weight and food consumption changes in P1 and F1 adult males and females and decreased pup weights in F1 and F2 generations.

Mutagenicity and Genotoxicity - The weight of evidence indicates this compound is neither mutagenic nor genotoxic. Negative results were obtained in the following: Ames bacterial assay; in vitro cytogenetics assay using Chinese Hamster Ovary cells (CHO/HPRT); unscheduled DNA synthesis assay using cultured primary rat hepatocytes; and micro nuclei induction in vivo assay using mouse bone marrow cells. Positive results were obtained in 2 of 3 in vitro chromosome aberration assays; however, these results were observed at the very high test concentrations where the solubility of the test compound is questionable. In a similar test system, using lower dose levels, the results were negative.

## HUMAN HEALTH EFFECTS

Overexposure to triflusaluron methyl by skin contact may initially include skin irritation with discomfort or rash. Significant skin permeation, and systemic toxicity, after contact appears unlikely. There are no reports of human sensitization. Overexposure by eye contact may initially include eye irritation with discomfort, tearing, or blurring of vision. Overexposure by inhalation may initially include 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

## INHALATION

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

## SKIN CONTACT

In case of contact, immediately wash skin with soap and water. Wash contaminated clothing before reuse.

## EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

## INGESTION

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

-----  
FIRE FIGHTING MEASURES  
-----

## 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. 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.

## (ACCIDENTAL RELEASE MEASURES - Continued)

## Initial Containment

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.

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

## Storage

Store product in original container only. Do not store or consume food, drink or tobacco in areas where they may become contaminated with this material. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

-----  
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.  
Waterproof gloves.  
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:

Long-sleeved shirt and long pants.  
Waterproof gloves.

## (EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

Shoes plus socks.

## Exposure Guidelines

## Applicable Exposure Limits

TRIFLUSULFURON METHYL

AEL \* (DuPont) : 2 mg/m<sup>3</sup>, 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

Solubility in Water : Dispersible  
pH : 8.6  
Odor : No distinct odor  
Form : Solid, dispersible granules  
Color : Brown  
Bulk Density (Loose) : 35 lb/cu ft  
Density : 0.5 g/mL

-----  
STABILITY AND REACTIVITY  
-----

## Chemical Stability

Stable at normal temperatures and storage conditions.

## Incompatibility with Other Materials

None reasonably foreseeable.

## Polymerization

Polymerization will not occur.

-----  
ECOLOGICAL INFORMATION  
-----

## Ecotoxicological Information

## Aquatic Toxicity

The following tox values are for the active ingredient -  
triflusulfuron methyl

## AQUATIC TOXICITY:

96 hour LC50, Bluegill Sunfish : 760 mg/L  
96 hour LC50, Rainbow Trout : 730 mg/L

## (ECOLOGICAL INFORMATION - Continued)

96 hour LC50, Carp : &gt;830 mg/L

## AVIAN TOXICITY:

Oral LD50, Mallard Duck : >2250 mg/kg  
Oral LD50, Bobwhite Quail : >2250 mg/kg  
Dietary LC50, Mallard Duck : >5620 ppm  
Dietary LC50, Bobwhite Quail : >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. 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.

## Container Disposal

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.

-----  
TRANSPORTATION INFORMATION  
-----

## Shipping Information

DOT/IMO  
Proper Shipping Name : 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. 352-569

-----  
OTHER INFORMATION  
-----

## NFPA, NPCA-HMIS

NFPA Rating  
Health : 1  
Flammability : 0  
Reactivity : 0

NPCA-HMIS Rating  
Health : 1  
Flammability : 0  
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