



DuPont
Material Safety Data Sheet

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M0000354 "UPBEET" HERBICIDE Revised 26-NOV-1996 Printed 6-DEC-1996

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"UPBEET" HERBICIDE is a registered 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
Transport Emergency : CHEMTREC 1-800-424-9300
Medical Emergency : 1-800-441-3637

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.

(HAZARDS IDENTIFICATION - Continued)

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 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

(HAZARDS IDENTIFICATION - Continued)

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 triflurosulfuron 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

(FIRST AID MEASURES - Continued)

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.

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.

(HANDLING AND STORAGE - Continued)

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.
Shoes plus socks.

Exposure Guidelines

Applicable Exposure Limits

TRIFLUSULFURON METHYL

AEL * (DuPont) : 2 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

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
96 hour LC50, Carp : >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

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 : Agricultural Products
Address : Wilmington, DE 19898
Telephone : 800-441-7515

Indicates updated section.

End of MSDS