



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

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"DuPont" "FREEFALL" SC COTTON DEFOLIANT
M0000608 Revised 31-JAN-2005

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Tradenames and Synonyms

"FREEFALL"
THIDIAZURON

Tradenames and Synonyms (Remarks)

"FREEFALL" is a registered trademark of Griffin LLC, a DuPont company.

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 | % |
|---|------------|------|
| THIDIAZURON | 51707-55-2 | 41 |
| (N-PHENYL-N-1,2,3-THIADIAZOL-5-YLUREA)* | | |
| 1,2-PROPYLENE GLYCOL | 57-55-6 | 5 |
| 1,2-BENZISOTHIAZOLIN-3-ONE | 2634-33-5 | 0.2 |
| OTHER INERT INGREDIENTS | | 53.8 |

Components (Remarks)

* Contains 4.0 lbs. of thidiazuron per gallon.

HAZARDS IDENTIFICATION

Emergency Overview

CAUTION. Harmful if swallowed, inhaled, or absorbed through the skin. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing. Do not contaminate food or feedstuffs.

Potential Health Effects

Eye Contact : Avoid contact with eyes.

Skin Contact : Avoid contact with skin or clothing.

Skin Absorption: Harmful if absorbed through the skin.

Inhalation : Harmful if inhaled. Avoid breathing spray mist.

Ingestion : Harmful if swallowed. There are no specific health effects known for ingestion of small amounts incidental to routine handling and use.

SIGNS AND SYMPTOMS EFFECTS OF ACUTE OVEREXPOSURE:
High oral doses can cause apathy (lack of feeling or emotion).

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 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: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

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

(FIRST AID MEASURES - Continued)

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.

Have 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.

Notes to Physicians

Supportive care and symptomatic treatment.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point & Method : >100°C / >212°F
Test Type: Setaflash tester
Method: Closed Cup

Autoignition Temperature : Not available

FIRE FIGHTING HAZARDS & PROCEDURES

Extinguishing Media : Water, foam, dry powder,
carbon dioxide (CO2).

Fire Fighting Equipment/
Instructions : Wear self-contained breathing
apparatus.

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.

Use proper equipment to minimize personal exposure. Take all necessary action to prevent and to remedy the effects of the spill. Ensure that the disposal is in compliance with Federal or local disposal regulations. Notify the appropriate authorities immediately. Report immediately to authorities if liquid enters watercourse or sewer.

(ACCIDENTAL RELEASE MEASURES - Continued)

Spill Clean Up

Land Spill or Leaks:

Wear impervious gloves when removing spillages and cleaning up contaminated areas.

HANDLING AND STORAGE

Handling (Personnel)

Avoid contact with skin, eyes and clothing. Do not contaminate food or feedstuffs.

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.

Storage

Do not contaminate water, food or feed by storage.

Store at temperatures below 100°F. If allowed to freeze, remix before using.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Control airborne concentrations below the exposure guidelines. Local exhaust ventilation may be necessary, when used in a confined area.

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

Eye/Face Protection:

- Safety glasses / goggles.

Respiratory Protection:

- Ensure adequate ventilation.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Waterproof gloves.
- Shoes plus socks.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

Follow manufacturer's instructions for cleaning and 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.
- Waterproof gloves.
- Shoes plus socks.

Exposure Guidelines

Applicable Exposure Limits

| | | |
|----------------------|---|--|
| 1,2-PROPYLENE GLYCOL | | |
| PEL (OSHA) | : | None Established |
| TLV (ACGIH) | : | None Established |
| AEL * (DuPont) | : | None Established |
| WEEL (AIHA) | : | 50 ppm, total; 10 mg/m ³ , aerosol only (8 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

| | | |
|----------------------|---|---------------------|
| Odor | : | Slightly sweet |
| Vapor Pressure | : | Not available |
| pH | : | 6.8 at 1% wt/wt |
| Solubility in Water: | : | Dispersible |
| Density | : | 1.1793 g/mL at 20°C |
| Physical State | : | Liquid |
| Color | : | Beige |

STABILITY AND REACTIVITY

Chemical Stability

| | | |
|--------------------------|---|----------------|
| General | : | Stable |
| Hazardous Polymerization | : | Will not occur |

TOXICOLOGICAL INFORMATION

Animal Data

Acute Oral Toxicity - Rat: LD50: > 500 mg/kg
Acute Dermal Toxicity - Rat: LD50: > 5,000 mg/kg
Acute Inhalation Toxicity - Rat: LC50: 4.33 mg/l 4 h
Acute Respiratory Irritation
No test data available
Skin Irritation - Rabbit: Non-irritating
Eye Irritation - Rabbit: Non-irritating.
Sensitization - Guinea pig: Non-sensitizing

THE FOLLOWING DATA BELOW WAS DEVELOPED WITH:
Thidiazuron technical (=98%), the active ingredient:

Sub-Chronic Toxicity: Results from 90-day animal studies suggest no target organ effects under the conditions of normal handling and use.

Chronic Toxicity:

In two-year feeding studies with rats and mice, no toxic effects were observed in animals administered thidiazuron up to the highest test dose (600 ppm and 1000 ppm, respectively). In a similar one-year study with dogs, no toxic effects were observed at the low dose (100 ppm). At the higher doses (300-1000 ppm), toxic hemolytic anemia associated with compensatory hemopoiesis was the main effect noted. However, the anemic conditions were only confined to a few susceptible dogs and, more importantly, the effects were reversible once thidiazuron was withdrawn from their diets. From these animal studies, it is concluded that no toxic effect of thidiazuron is expected under normal conditions of use.

Reproductive & Developmental Toxicity:

No adverse effects on fertility or reproduction were observed in a three-generation rat study.

Neurotoxicity: Data not available.

Teratogenicity:

No teratogenic effects were observed for thidiazuron in rat or rabbit teratology studies.

Mutagenicity:

Thidiazuron is not mutagenic or genotoxic when tested in several mutagenicity studies.

DISPOSAL CONSIDERATIONS

Waste Disposal

Do not contaminate water, food or feed by 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 when disposing of equipment washwaters. Do not apply when weather conditions favor drift from targeted area.

Container Disposal

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.

TRANSPORTATION INFORMATION

Shipping Information

Department of Transportation (DOT): Not Regulated
Freight Class: Defoliant, Plant, N.O.I.

REGULATORY INFORMATION

U.S. Federal Regulations

EPA Reg. No. 264-700-352

TSCA List:

1,2-Propylene glycol : 57-55-6
1,2-benzisothiazolin-3-one : 2634-33-5

TSCA 12b Export Notification:

None

CERCLA:

None

SARA TITLE III

302 Notification and Information : None
313 Reportable Ingredients : None

US State Right-to-Know Ingredients:

1,2-Propylene glycol 57-55-6 PA, RI

OTHER INFORMATION

NFPA, NPCA-HMIS

HAZARDS CLASSIFICATION:
(0-minimal, 1-slight, 2-moderate, 3-serious, 4-severe)

HMIS: HEALTH-1 FIRE-1 REACTIVITY-0
NFPA: HEALTH-1 FIRE-1 REACTIVITY-0

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

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