

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-992-5994  
Dow AgroSciences LLC  
Indianapolis, IN 46268

## SURMOUNT\* HERBICIDE

Effective Date: 2/2/04  
Product Code: 56550  
MSDS: 007594

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** Surmount\* Herbicide

#### COMPANY IDENTIFICATION:

Dow AgroSciences  
9330 Zionsville Road  
Indianapolis, IN 46268-1189

### 2. COMPOSITION/INFORMATION ON INGREDIENTS:

Picloram TIPA: 2-pyridine- carboxylic acid, 4-amino- 3,5,6-trichloro-, compound with 1,1',1''-nitritoltris[2-propanol] (1:1)	CAS # 001918-02-1	13.24%
Fluroxypyr MHE: 1-methyl- heptyl ester [(4-amino-3,5-dichloro- 6-fluoropyridin-2-yl)oxy]acetate	CAS # 081406-37-3	10.64%
Inert Ingredients, Total, Including		76.12%
Triisopropanolamine	CAS # 000122-20-3	
Dowanol DPM-GE	CAS # 034590-94-8	
Aromatic Solvent	CAS # 064742-94-5	
(Contains Naphthalene	CAS # 000091-20-3)	

### 3. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Hazardous Chemical. Amber liquid with an amine odor. May cause eye and skin irritation. May cause corneal injury. LD<sub>50</sub> for skin absorption is >5000 mg/kg. Oral LD<sub>50</sub> is >5000 mg/kg. Aerosol LC<sub>50</sub> is >5.56 mg/L for 4 hours. Toxic to aquatic organisms.

**EMERGENCY PHONE NUMBER:** 800-992-5994

**POTENTIAL HEALTH EFFECTS:** This section includes possible adverse effects, which could occur if this material is not handled in the recommended manner.

**EYE:** May cause severe eye irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

**SKIN:** Prolonged contact may cause slight skin irritation with local redness. May cause drying and flaking of the skin. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD<sub>50</sub> for skin absorption in rats is >5000 mg/kg. Did not cause allergic skin reactions when tested in guinea pigs.

**INGESTION:** Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts. The oral LD<sub>50</sub> for rats is >5000 mg/kg.

**INHALATION:** Prolonged exposure is not expected to cause adverse effects. Mist may cause irritation of upper respiratory tract (nose and throat) and lungs. The aerosol LC<sub>50</sub> for rats is >5.56 mg/L for 4 hours.

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** For picloram salt and Dowanol DPM-GE, observations in animals include liver and kidney effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

**CANCER INFORMATION:** Contains naphthalene, which has caused cancer in some laboratory animals.

**TERATOLOGY (BIRTH DEFECTS):** Birth defects are unlikely. Exposures having no adverse effects on the mother should have no effect on the fetus.

**REPRODUCTIVE EFFECTS:** In animal studies on the components tested, did not interfere with reproduction.

### 4. FIRST AID:

**EYE:** Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

**SKIN:** Wash skin with plenty of water.

**INGESTION:** No emergency medical treatment necessary.

**INHALATION:** Move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

**NOTE TO PHYSICIAN:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

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### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** >212°F (>100°C)

**METHOD USED:** Closed cup

#### FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

**EXTINGUISHING MEDIA:** Foam, CO<sub>2</sub>, Dry chemical

**FIRE AND EXPLOSION HAZARDS:** Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed under fire conditions.

**FIRE-FIGHTING EQUIPMENT:** Use positive-pressure, self-contained breathing apparatus and full protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES:

**ACTION TO TAKE FOR SPILLS:** Absorb small spills with an absorbent such as sand and sweep up for disposal. Report large spills to Dow AgroSciences on 800-992-5994. Contain spills to keep out of sewers or any water sources.

### 7. HANDLING AND STORAGE:

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapors and spray mist. Handle concentrate in ventilated area. Wash thoroughly with soap and water after handling and before eating, chewing gum, using tobacco, using the toilet or smoking. Keep away from food, feedstuffs, and water supplies.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

These precautions are suggested for conditions where a potential for exposure exists. Emergency conditions may require additional precautions.

#### EXPOSURE GUIDELINES:

Fluroxypyr 1-MHE: Dow AgroSciences Industrial Hygiene Guide is 10 mg/M<sup>3</sup>.

Picloram TIPA Salt: None established. For the acid ACGIH TLV is 10 mg/M<sup>3</sup> and OSHA PEL is 15 mg/M<sup>3</sup> total, 5 mg/M<sup>3</sup> respirable.

Dowanol DPM-GE: ACGIH TLV is 100 ppm TWA, 150 ppm STEL. OSHA PEL is 100 ppm TWA.

Petroleum solvent: None established. Supplier recommends a guideline of 100 ppm for the total product, which is a mixture of aromatic hydrocarbons.

Naphthalene: ACGIH TLV is 10 ppm TWA, 15 ppm STEL, Skin, A4. OSHA PEL is 10 ppm TWA.

Triisopropanolamine: Dow AgroSciences Industrial Hygiene Guide is 10 mg/M<sup>3</sup>.

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

**ENGINEERING CONTROLS:** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

#### RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

**EYE/FACE PROTECTION:** Use chemical goggles. Eye wash fountain should be located in immediate work area.

**SKIN PROTECTION:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur.

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guidelines. If respiratory irritation is experienced, use a NIOSH approved air-purifying respirator.

**APPLICATORS AND ALL OTHER HANDLERS:** Refer to the product label for personal protective clothing and equipment.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**APPEARANCE:** Amber liquid  
**SOLUBILITY:** Emulsifiable in water  
**ODOR:** Amine odor  
**SPECIFIC GRAVITY:** 1.083 @ 20°C

### 10. STABILITY AND REACTIVITY:

**STABILITY: (CONDITIONS TO AVOID)** Stable under normal handling and storage conditions.

**INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID)**  
None known.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Under fire conditions, hydrogen chloride and nitrogen oxides will be formed.

**HAZARDOUS POLYMERIZATION:** Not known to occur.

### 11. TOXICOLOGICAL INFORMATION:

**MUTAGENICITY:** For the components tested in-vitro and animal mutagenicity studies were negative.

### 12. ECOLOGICAL INFORMATION:

#### ENVIRONMENTAL FATE:

#### MOVEMENT & PARTITIONING:

Based largely or completely on information for fluroxypyr MHE, Dowanol DPM-GE, and triisopropanolamine. Bioconcentration potential is low (BCF is <100 or Log Pow <3).

Based largely or completely on information for Picloram TIPA Salt.

Bioconcentration potential is moderate (BCF is between 100 and 3000 or Log Pow between 3 and 5).

Based largely or completely on information for the solvent. Bioconcentration potential is high (BCF is >3000 or Log Pow between 5 and 7).

### DEGRADATION & PERSISTENCE:

Based largely or completely on information for fluroxypyr MHE and picloram TIPA Salt.

No relevant information found.

Based largely or completely on information for Dowanol DPM-GE.

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

### ECOTOXICOLOGY:

Based largely or completely on information for Dowanol DPM-GE.

Material is practically non-toxic to aquatic organisms on an acute basis (LC<sub>50</sub> or EC<sub>50</sub> is >100 mg/L in the most sensitive species tested).

Based largely or completely on information for picloram TIPA salt and triisopropanolamine.

Material is slightly toxic to aquatic organisms on an acute basis (LC<sub>50</sub> or EC<sub>50</sub> is between 10 and 100 mg/L in the most sensitive species tested).

Based largely or completely on information for the solvent.

Material is highly toxic to aquatic organisms on an acute basis (LC<sub>50</sub> or EC<sub>50</sub> is between 0.1 and 1 mg/L in the most sensitive species tested).

### 13. DISPOSAL CONSIDERATIONS:

**DISPOSAL METHOD:** Do not contaminate water, food, or feed by storage or disposal. Excess pesticide resulting from the use of this product may be disposed of on site according to label directions or at an approved waste disposal facility. Follow all local, state, and federal requirements for disposal.

### 14. TRANSPORT INFORMATION:

#### U.S. DEPARTMENT OF TRANSPORTATION (DOT) INFORMATION:

This product is not regulated for all modes of transportation in non-bulk quantities.

For bulk quantities >4700 pounds:

ENVIRONMENTALLY HAZARDOUS SUBSTANCES,  
LIQUID, N.O.S./(CONTAINS NAPHTHALENE)/9/  
UN3082/PG III/RQ(NAPHTHALENE)

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### 15. REGULATORY INFORMATION:

**NOTICE:** The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.

#### U.S. REGULATIONS

**SARA 313 INFORMATION:** This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
NAPHTHALENE	000091-20-3	2.1%
PICLORAM	001918-02-1	13.24%

**SARA HAZARD CATEGORY:** This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard  
A delayed health hazard

**CALIFORNIA PROPOSITION 65:** The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains a chemical(s) known to the State of California to cause cancer. During processing of our product, exposure may exceed the levels deemed to represent significant risk as defined by the emergency guidelines in 22 California Code of Regulations, Division 2, Chapter 3, Article 7. The chemical is naphthalene (CAS # 000091-20-3)

**TOXIC SUBSTANCES CONTROL ACT (TSCA):** All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

**STATE RIGHT-TO-KNOW:** The following product components are cited on certain state lists as mentioned. Non-listed components may be shown in the composition section of the MSDS.

CHEMICAL NAME	CAS NUMBER	LIST
NAPHTHALENE	000091-20-3	NJ2 NJ3 PA1 PA3
PICLORAM	001918-02-1	NJ2 NJ3 PA1
DOWANOL DPM-GE	034590-94-8	NJ3 PA1

NJ2=New Jersey Environmental Hazardous Substance (present at greater than or equal to 1.0%).

NJ3=New Jersey Workplace Hazardous Substance (present at greater than or equal to 1.0%).

PA1=Pennsylvania Hazardous Substance (present at greater than or equal to 1.0%).

PA3=Pennsylvania Environmental Hazardous Substance (present at greater than or equal to 1.0%).

**OSHA HAZARD COMMUNICATION STANDARD:** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):** This product contains the following substance(s) listed as "Hazardous Substances" under CERCLA, which may require reporting of releases:

Chemical Name	CAS#	RQ	% in Product
Naphthalene	000091-20-3	100 lb.	2.1%

### 16. OTHER INFORMATION:

**MSDS STATUS:** New  
Reference: DR-0344-2384  
Document Code: D03-198-001

The Information Herein Is Given In Good Faith, But No Warranty, Express or Implied, Is Made. Consult Dow AgroSciences for Further Information.