

# MATERIAL SAFETY DATA SHEET



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

Effective Date: 15-Jun-10  
Product Code: 41753  
MSDS: 004778

## PATHFINDER\* II HERBICIDE

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** Pathfinder\* II Herbicide

**COMPANY IDENTIFICATION:**

Dow AgroSciences  
9330 Zionsville Road  
Indianapolis, IN 46268-1189

**NOTE TO PHYSICIAN:** The decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 2. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Yellow to amber liquid. May cause eye and skin irritation. Toxic to aquatic organisms.

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

### 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Component	CAS Number	W/W%
Triclopyr BEE	64700-56-7	13.8
Balance		86.2

### 4. FIRST AID:

**EYES:** Flush eyes thoroughly with water for several minutes. Remove contact lenses after initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

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

**INGESTION:** Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.

**INHALATION:** Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc.). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** 350°F (177C)

**METHOD USED:** SFCC

**FLAMMABLE LIMITS**

LFL: Not determined

UFL: Not determined

**EXTINGUISHING MEDIA:** Water fog, foam.

**FIRE & EXPLOSION HAZARDS:** May emit toxic, irritating vapors if involved in a fire.

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

### 6. ACCIDENTAL RELEASE MEASURES:

**ACTION TO TAKE FOR SPILLS/LEAKS:** Dike large spills. Keep out of streams and domestic water supplies. Absorb small spills in inert material such as dry sand. Eliminate all ignition sources. Report large spills to Dow AgroSciences at 800-992-5994.

### 7. HANDLING AND STORAGE:

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Keep out of reach of children. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with skin, eyes, and clothing. Avoid breathing vapor or spray mist. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Store in the original container with the lid tightly closed.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

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

#### EXPOSURE GUIDELINE(S):

Triclopyr BEE: Dow AgroSciences Industrial Hygiene Guide is 2 mg/M<sup>3</sup> as acid equivalent, D-SEN.

A D-SEN notation following the exposure guideline refers to the potential to produce dermal sensitization, as confirmed by human or animal data.

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

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

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: organic vapor cartridge.

**SKIN PROTECTION:** When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.

**EYE/FACE PROTECTION:** Use safety glasses. If exposure causes eye discomfort, use a full-face respirator.

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

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**BOILING POINT:** 425 °F (218.5C) @ 20 mmHg  
**VAPOR PRESSURE:** Not determined  
**VAPOR DENSITY:** Not determined  
**SOLUBILITY IN WATER:** Insoluble  
**SPECIFIC GRAVITY:** 0.920 at 20C (68°F)  
**APPEARANCE:** Yellow to amber liquid  
**ODOR:** Minimal  
**FREEZING POINT:** -10C (13°F)

### 10. STABILITY AND REACTIVITY:

**STABILITY:** (CONDITIONS TO AVOID) Stable under normal storage and handling conditions. Product will burn; keep away from heat and open flame.

**INCOMPATIBILITY:** (SPECIFIC MATERIALS TO AVOID) Acids, bases, and strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, nitrogen oxides, hydrogen chloride, and phosgene may be formed if product is involved in fire.

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

### 11. TOXICOLOGICAL INFORMATION:

**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 slight temporary eye irritation. Corneal injury is unlikely. Vapor may cause eye irritation experienced as mild discomfort and redness.

**SKIN:** Prolonged skin contact may cause moderate skin irritation with local redness. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The LD<sub>50</sub> for skin absorption in rabbits is >2000 mg/kg. Did not cause allergic skin reactions when tested in guinea pigs.

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**INGESTION:** Low toxicity if swallowed. The oral LD<sub>50</sub> for rats was 1000 mg/kg (females). Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

**INHALATION:** The LC<sub>50</sub> for rats is >5.0 mg/L for 4 hours. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause central nervous system effects. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed.

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** For triclopyr BEE, in animals, effects have been reported on the following organs: blood, kidney and liver.

**CANCER INFORMATION:** Triclopyr BEE did not cause cancer in laboratory animals.

**TERATOLOGY (BIRTH DEFECTS):** Triclopyr BEE did not cause birth defects in laboratory animals. Triclopyr BEE has been toxic to the fetus in laboratory animals at doses toxic to the mother.

**REPRODUCTIVE EFFECTS:** For triclopyr BEE, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

**MUTAGENICITY:** For triclopyr BEE, in-vitro and animal genetic toxicity studies were negative.

### 12. ECOLOGICAL INFORMATION:

#### ENVIRONMENTAL DATA

#### MOVEMENT & PARTITIONING:

Based largely or completely on information for triclopyr BEE. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

#### DEGRADATION & PERSISTENCE:

Based largely or completely on information for triclopyr BEE. Based on the stringent OECD test guidelines, this material cannot be considered as readily biodegradable; however, these results do not necessarily mean that the material is not biodegradable under environmental conditions.

#### ECOTOXICOLOGY:

Based largely or completely on information for triclopyr BEE. Material is highly toxic to aquatic organisms on an acute basis (LC<sub>50</sub> or EC<sub>50</sub> between 0.1 and 1 mg/L in most sensitive species.)

### 13. DISPOSAL CONSIDERATIONS:

**DISPOSAL METHOD:** If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws and regulations.

### 14. TRANSPORT INFORMATION:

**DOT Non-Bulk**  
NOT REGULATED

**DOT Bulk**  
NOT REGULATED

#### IMDG

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S

**Technical Name:** Contains Triclopyr-2-butoxyethyl Ester

**Hazard Class:** 9 **ID Number:** UN3082

**Packing Group:** PG III

**EMS Number:** f-a,s-f

**Marine pollutant.:** Yes

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**Cargo Packing Instruction:** 914  
**Passenger Packing Instruction:** 914

### Additional Information

MARINE POLLUTANT

### 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:** To the best of our knowledge, this product contains no chemical subject to SARA Title III Section 313 supplier notification requirements.

**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

**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:** This product is not known to contain any substances subject to the disclosure requirements of

Pennsylvania

### NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Category	Rating
Health	1
Flammability	1
Reactivity	0

**COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (CERCLA, or SUPERFUND):** To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

### 16. OTHER INFORMATION:

**MSDS STATUS:** Revised Sections: 14  
Reference: DR-0298-9448  
Replaces MSDS dated: 09-Jul-10  
Document Code: D03-104-007  
Replaces Document Code: D03-104-006

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