

# SAFETY DATA SHEET



In case of emergency Call  
**CANUTEC at 613-996-6666**

Effective Date: September 16, 2008  
Product Code: 119843

## PRODUCT: RELEASE\* MSO Herbicide

This product is regulated under authority of the Pest Control Products Act

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** Release\* MSO Herbicide

**USE:** Control of undesirable woody plants and broadleaved weeds in forest and woodland management areas

#### COMPANY/SUPPLIER IDENTIFICATION:

Dow AgroSciences Canada Inc.  
Suite 2100 450 - 1 ST SW  
Calgary, Alberta  
Canada, T2P 5H1  
[www.dowagro.ca](http://www.dowagro.ca)

### 2. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Color: Colorless to yellow

Odor: Mild

Appearance: Liquid

Health/Environmental Hazards: Causes eye and skin irritation. May cause allergic skin reaction. Toxic to aquatic organisms and birds.

**EMERGENCY PHONE NUMBER: CANUTEC 613-996-6666**

### 3. COMPOSITION/INFORMATION ON INGREDIENTS:

Component	CAS Number	W/W%
Triclopyr-2-butoxyethyl ester	64700-56-7	60.5
Ethylene glycol monobutyl ether	111-76-2	0.5
Balance		39.0

### 4. FIRST AID:

**EYE:** Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

**SKIN:** 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.

**INGESTION:** 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. Never give anything by mouth to an unconscious person.

**INHALATION:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

**NOTE TO PHYSICIAN:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** >100C

**METHOD USED:** TCC

#### FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

**EXTINGUISHING MEDIA:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective. Water fog, applied gently may be used as a blanket for fire extinguishment.

**FIRE FIGHTING PROCEDURES:** Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

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### SPECIAL PROTECTIVE EQUIPMENT FOR

**FIREFIGHTERS:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

**HAZARDOUS COMBUSTION PRODUCTS:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: nitrogen oxides, hydrogen chloride, carbon monoxide, carbon dioxide, and phosgene.

### 6. ACCIDENTAL RELEASE MEASURES:

**ACTION TO TAKE FOR SPILLS:** Contain spilled material if possible. Absorb small spills with materials such as clay, dirt, or sand. Sweep up. Collect in a suitable and properly labeled containers. For large spills, dike and barricade the affected area and contact CANUTEC at 613-996-6666 and local authorities.

**PERSONAL PRECAUTIONS:** Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**ENVIRONMENTAL PRECAUTIONS:** Prevent from entering soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

### 7. HANDLING AND STORAGE:

#### PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:

**Handling:** Keep out of reach of children. Do not swallow. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Wash thoroughly handling.

**Storage:** Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

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

#### EXPOSURE GUIDELINES:

Triclopyr-2-butoxyethyl ester: Dow AgroSciences Industrial Hygiene Guideline is 2.0 mg/M<sup>3</sup>, TWA 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:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most applications.

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

**EYE/FACE PROTECTION:** Use safety glasses.

**SKIN PROTECTION:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items which cannot be decontaminated, such as shoes, belts and watchbands, should be removed and disposed of properly.

**Hand protection:** Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: butyl rubber, chlorinated polyethylene, neoprene, polyethylene, and ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: natural rubber ("latex"), viton, polyvinyl chloride ("PVC" or "vinyl"), and nitrile/butadiene rubber ("nitrile" or "NBR"). **NOTICE:** The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the

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instructions/specifications provided by the glove supplier.

**RESPIRATORY PROTECTION:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. The following should be effective types of air-purifying respirators: organic vapor cartridge with a particulate pre-filter.

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

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**APPEARANCE:** Colorless to yellow liquid  
**ODOR:** Mild  
**AUTOIGNITION TEMPERATURE:** >325C  
**VAPOR PRESSURE:** No test data available  
**DENSITY:**  
**BOILING POINT:** No test data available  
**SPECIFIC GRAVITY:** 1.11  
**FREEZING POINT:** No test data available  
**MELTING POINT:** No test data available  
**SOLUBILITY IN WATER:** Emulsifies  
**pH:** 3.4

### 10. STABILITY AND REACTIVITY:

**STABILITY: (CONDITIONS TO AVOID)** Thermally stable at typical use temperatures. Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems.

**INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID)**  
Avoid contact with: strong acids, strong bases, and strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:**  
Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: hydrogen chloride, nitrogen oxides, and phosgene.

**HAZARDOUS POLYMERIZATION:** Will not occur.

### 11. TOXICOLOGICAL INFORMATION:

**EYE:** May cause slight eye irritation. Corneal injury is unlikely.

**SKIN:** Brief contact may cause moderate 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. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. Has caused allergic skin reactions when tested in mice.

**INGESTION:** Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. The oral LD<sub>50</sub> in female rats is 3200 mg/kg.

**INHALATION:** Prolonged exposure is not expected to cause adverse effects. The aerosol LC<sub>50</sub> for rats is >5.05 mg/L for 4 hours.

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

**CANCER INFORMATION:** In long-term animal studies with ethylene glycol butyl ether, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man. Triclopyr did not cause cancer in laboratory animals.

**TERATOLOGY (BIRTH DEFECTS):** The active ingredient has been toxic to the fetus in lab animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

**REPRODUCTIVE EFFECTS:** For triclopyr, in animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Butoxyethanol, in animal studies, did not interfere with reproduction. For the minor component(s), available data are inadequate to determine effects on reproduction,

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**MUTAGENICITY:** For the active ingredient, in-vitro and animal genetic toxicity studies were negative.

### 12. ECOLOGICAL INFORMATION:

#### ENVIRONMENTAL FATE:

#### MOVEMENT & PARTITIONING:

For the active ingredient, bioconcentration potential is low (BCF <100 or Log Pow <3). Potential for mobility in soil is low (Koc between 500 and 2000).

#### DEGRADATION & PERSISTANCE:

Based largely or completely on information for similar material(s), biodegradation under aerobic static laboratory conditions is moderate (BOD20 or BOD28/ThOD between 10 and 40%).

#### ECOTOXICOLOGY:

Based largely or completely on information for similar material(s), Material is highly toxic to aquatic organisms on an acute basis (LC<sub>50</sub>/EC<sub>50</sub> between 0.1 and 1 mg/L in the most sensitive species tested). Material is slightly toxic to birds on an acute basis (LD<sub>50</sub> between 501 and 2000 mg/kg).

### 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:

#### TRANSPORTATION OF DANGEROUS GOODS INFORMATION:

**TDG Small container**  
NOT REGULATED

**TDG Large container**  
NOT REGULATED

**IMDG**  
NOT REGULATED

**ICAO/IATA**  
NOT REGULATED

### 15. REGULATORY INFORMATION:

**Pest Control Products Act registration number:** 28431  
**For information phone:** 800 667 3852

**SDS Version :** 1  
**SDS Revisions :** New

### 16. OTHER INFORMATION:

#### National Fire Code classification: Class IIIB

NFPA ratings:  
Health: 2  
Flammability: 1  
Reactivity: 0

**Notice:** The information contained in this Safety Data Sheet ("SDS") is current as of the effective date shown in Section 1 of this SDS and may be subject to amendment by Dow AgroSciences Canada Inc. ("DASCI") at any time. DASCI accepts no liability whatsoever which results in any way from the use of SDS that are not published by DASCI, or have been amended without DASCI express written authorization. Users of this SDS must satisfy themselves that they have the most recent and authorized version of this SDS and shall bear all responsibility and liability with respect thereto. Any conflict or inconsistencies as to the contents of this SDS shall be resolved in favor of DASCI by the most recent version of the SDS published by DASCI.

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