

MATERIAL SAFETY DATA SHEET



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

Effective Date: 8-19-05
Product: 05304

REMEDY* ULTRA HERBICIDE

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT: Remedy* Ultra Herbicide

COMPANY IDENTIFICATION:

Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268-1189

2. HAZARDOUS IDENTIFICATIONS:

EMERGENCY OVERVIEW

Liquid with vegetable oil odor. May cause eye and skin irritation. Toxic to aquatic organisms and birds.

EMERGENCY PHONE NUMBER: 800-992-5994

3. COMPOSITION/INFORMATION ON INGREDIENTS:

Triclopyr-butotyl	CAS # 64700-56-7	60.5%
Balance, Total		39.5%

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, and then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

SKIN: Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

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 911 or an ambulance, and 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 MSDS, 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: >200°F (>93.3°C)

METHOD USED: Not applicable

FLAMMABLE LIMITS

LFL: Not determined

UFL: Not determined

EXTINGUISHING MEDIA: Foam, CO₂, or 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 materials such as sand, sawdust, Zorball, or dirt. Wash exposed body areas thoroughly after handling. 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. 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. Store in original container in a well-ventilated area.

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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:

3,5,6-trichloro-2-pyridinyloxyacetic acid: Dow AgroSciences Industrial Hygiene Guide is 2 mg/M3 as acid equivalent, Skin.

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 safety glasses.

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 guideline. When respiratory protection is required for certain operations, use a NIOSH approved air-purifying respirator.

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

9. PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE: Liquid

ODOR: Vegetable Oil

DENSITY: 1.109 g/mL

10. STABILITY AND REACTIVITY:

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

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) None known.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

HAZARDOUS POLYMERIZATION: Not know to occur.

11. TOXICOLOGICAL INFORMATION:

EYE: May cause eye irritation.

SKIN: Prolonged contact may cause skin irritation with local redness. Prolonged skin contact is unlikely to result in absorption of harmful amounts. The dermal LD₅₀ has not been determined. For triclopyr-butotyl: prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.

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. Single dose oral LD₅₀ has not been determined.

INHALATION: No adverse effects are anticipated from single exposure to vapor.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: Triclopyr-butotyl, in animals, effects have been reported on the following organs: blood, kidney and liver.

CANCER INFORMATION: For a similar material: triclopyr: did not cause cancer in laboratory animals.

TERATOLOGY (BIRTH DEFECTS): Triclopyr-butotyl did not cause birth defects in laboratory animals. Has been toxic to the fetus in laboratory animals only at doses toxic to the mother.

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

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MUTAGENICITY: For triclopyr-butotyl: in-vitro and animal genetic toxicity studies were negative.

12. ECOLOGICAL INFORMATION:

ENVIRONMENTAL FATE:

MOVEMENT & PARTITIONING:

Based largely or completely on information for triclopyr-butotyl.

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

DEGRADATION & PERSISTENCE:

Based largely or completely on information for triclopyr-butotyl.

Based on 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-butotyl.

Material is highly toxic to aquatic organisms on an acute basis (LC₅₀ or EC₅₀ is between 0.1 and 1 mg/L in the most sensitive species tested).

Material is slightly toxic to birds on an acute basis (LD₅₀ is between 501 and 2000 mg/kg).

Material is practically non-toxic to birds on a dietary basis (LC₅₀ is >5000 ppm).

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:

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

For all package sizes by all modes of transportation:
This material is not regulated for transport.

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 Section 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

New Jersey
Pennsylvania

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

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**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: New

Reference: DR-0394-3848

Replaces RSSDS Dated: 8/11/04

Document code: D03-334-001

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