

# MATERIAL SAFETY DATA SHEET



Emergency Phone: 800-424-9300  
Repar Corporation  
Silver Spring, MD 20914

Effective Date: July, 2009

## ELIMINATOR HERBICIDE

### 1. PRODUCT AND COMPANY IDENTIFICATION:

**PRODUCT:** Eliminator Herbicide

**COMPANY IDENTIFICATION:**

Repar Corporation  
PO Box 4321  
Silver Spring, MD 20914

### 2. HAZARDOUS IDENTIFICATIONS:

#### EMERGENCY OVERVIEW

Amber liquid. Combustible. Kerosene-like odor. May cause eye and skin irritation. Toxic to aquatic organisms.

**EMERGENCY PHONE NUMBER:** (800) 424-9300  
(CHEMTREC, transportation and spills)

### 3. COMPOSITION/INFORMATION ON INGREDIENTS:

COMPONENT	CAS NUMBER	W/W%
2,4 – D BEE	1929-73-3	34.4
Triclopyr ((3,5,6-trichloro-2-pyridinyl)oxy) acetic acid, butoxy ethyl ester	64700-56-7	16.5
Kerosene	8008-20-6	41.5
Balance		7.6

### 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 minutes. If affects 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 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:** 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. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

### 5. FIRE FIGHTING MEASURES:

**FLASH POINT:** 148°F (64.4°C)

**METHOD USED:** Setaflash

**FLAMMABLE LIMITS**

LFL: Not determined

UFL: Not determined

**EXTINGUISHING MEDIA:** Water fog, foam, CO<sub>2</sub>, and dry chemical.

**FIRE & EXPLOSION HAZARDS:** Combustible. Noxious fumes under fire conditions. Contain water from fire fighting to prevent entry to surface and ground water.

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

### 6. ACCIDENTAL RELEASE MEASURES:

**ACTION TO TAKE FOR SPILLS/LEAKS:** Keep out of streams and domestic water supplies. Absorb small spills in inert material such as sand. For large spills, dike the area and contact CHEMTREC at (800) 424-9300 for transportation and spills.

### 7. HANDLING AND STORAGE:

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

**HANDLING:** Keep out of reach of children. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with eyes, skin and clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

**STORAGE:** Keep product away from open flame. Do not exceed 140°F. Do not store with acids, bases or oxidizing

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materials. See product label for handling/storage precautions relative to the end use of this product.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

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

#### EXPOSURE GUIDELINE(S):

Triclopyr, butoxyethyl ester: is 2 mg/M<sup>3</sup> as acid equivalent, D-SEN.

Kerosene: is 10 mg/M<sup>3</sup>.

2, 4-Dichlorophenoxyacetic acid, butoxyethyl ester: none established for the ester; ACGIH, TLV and OSHA PEL are 10mg/M<sup>2</sup> for the acid.

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 guidelines.

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

**RESPIRATORY PROTECTION:** Atmospheric levels should be maintained below the exposure guidelines. 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:** Use gloves chemically resistant to this material.

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

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

### 9. PHYSICAL AND CHEMICAL PROPERTIES:

**BOILING POINT:** >175°C (kerosene)  
**VAPOR PRESSURE:** 0.1 mm @ 37.8°C (kerosene)  
**VAPOR DENSITY:** >4.7  
**SOLUBILITY IN WATER:** Forms an emulsion  
**SPECIFIC GRAVITY:** 1.013 @ 20°C  
**APPEARANCE:** Reddish brown liquid  
**ODOR:** Sweet odor.

### 10. STABILITY AND REACTIVITY:

**STABILITY:** (CONDITIONS TO AVOID) Avoid temperatures above or near flash point.

**INCOMPATIBILITY:** (SPECIFIC MATERIALS TO AVOID) Acid, base, and oxidizing material.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Noxious fumes, nitrogen oxides, hydrogen chloride and phosgene may result under fire conditions.

**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.

**SKIN:** Prolonged or repeated contact may cause skin irritation. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. With the dilute mix, no allergic skin reaction is expected. Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated skin contact may result in absorption of harmful amounts. The LD<sub>50</sub> for skin absorption is >5000 mg/kg (rabbits).

**INGESTION:** Low toxicity if swallowed. The oral LD<sub>50</sub> for rats is 1,000-2,589 mg/kg (males) and 1,000-2,398 mg/kg (females). Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

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Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonia.

**INHALATION:** Excessive exposure may cause irritation to upper respiratory tract (nose and throat). May cause central nervous system effects. The LC<sub>50</sub> for rats is ~ 5 mg/L (males) and >5 mg/L (females).

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** Effects have been reported on the following organs: blood, gastrointestinal tract, kidney, liver, muscle, and respiratory tract.

**CANCER INFORMATION:** Triclopyr did not cause cancer in laboratory animals. Various animal cancer tests have shown no reliable positive association between 2,4-D exposure and cancer. Epidemiology studies on herbicide use have been both positive and negative with the majority being negative. In a lifetime animal dermal carcinogenicity study, an increased incidence of skin tumors was observed when kerosene was applied at doses that also produced skin irritation. This response was similar to that produced in skin by other types of chronic chemical/physical irritation. No increase in tumors was observed when non-irritating dilutions of kerosene were applied at equivalent doses, indicating that kerosene is unlikely to cause skin cancer in the absence of long-term continued skin irritation.

**TERATOLOGY (BIRTH DEFECTS):** Did not cause birth defects; other fetal effects occurred only at doses toxic to the mother.

**REPRODUCTIVE EFFECTS.** Triclopyr, laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Excessive dietary levels of 2,4-D acid have caused decreased weight and survival in offspring in a rat reproduction study.

**MUTAGENICITY:** For the components tested, in-vitro and animal genetic toxicity studies were predominantly negative.

## 12. ECOLOGICAL INFORMATION:

### ENVIRONMENTAL FATE:

### MOVEMENT & PARTITIONING:

Based largely or completely on information for triclopyr and 2,4-D.

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

### DEGRADATION & PERSISTENCE:

Based largely or completely on information triclopyr and 2,4-D.

Chemical degradation (hydrolysis) is expected in the environment within minutes to hours.

Based largely or completely on information for kerosene.

Biodegradation under aerobic static laboratory conditions is high (BOD<sub>20</sub> or BOD<sub>28</sub>/ThOD is >40%).

### ECOTOXICOLOGY:

Based largely or completely on information for triclopyr and 2,4-D.

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 most sensitive species tested).

Based largely or completely on information for kerosene. EC<sub>50</sub> is above the water solubility.

## 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.

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### 14. TRANSPORT INFORMATION;

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

FOR 4 OUNCE, 12x1 QUART, 4x1 GALLON, AND 2x2.5 GALLON

BY LAND OR AIR:

Not regulated for transportation.

BY VESSEL:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D ACID)/9/UN3082/PGIII/MARINE POLLUTANT

FOR 55 GALLON DRUMS

BY LAND OR AIR:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D ACID)/9/UN3082/PGIII/RQ (2,4-D ACID)

BY VESSEL:

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-D ACID)/9/UN3082/PGIII/RQ (2,4-D ACID)/MARINE POLLUTANT

FOR BULK SHIPMENTS

BY DOMESTIC OR VESSEL:

COMBUSTIBLE LIQUID, N.O.S./(3,5,6-TRICHLORO-2-PYRIDINYLOXY-ACETIC ACID ETHYL ESTER)/COMBUSTIBLE LIQUID/NA1993/PG III/RQ (2,4-D ACID)/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: 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
2,4-D ESTERS	1929-73-3	34.4%

**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  
A fire 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:** 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
2,4-D ESTERS	1929-73-3	PA3 NJ3 PA1
KEROSENE	8008-20-6	NJ3 PA1

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.

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

Health	1
Flammability	2
Reactivity	0

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**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:

Category:

Chemical Name	CAS Number	RQ	% in Product
2,4-D BEE -	1929-73-3	100 lbs.	34.4

### 16. OTHER INFORMATION:

**DISCLAIMER:** The information presented herein is based on available data from reliable sources and is correct to the best of Repar's knowledge. Repar Corporation makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions.

**DATE PREPARED:** July, 2009