# Material Safety Data Sheet

Transportation and Medical Emergency Phone: 1-800-535-5053
(INFOTRAC)
General Phone: 317-580-8282

EPA Reg. Number: 62719-37-67690
Effective Date: 01/22/03

# Renovate† 3 Herbicide

**SePRO Corporation** Carmel, IN 46032

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT:** Renovate† 3 Herbicide

**COMPANY IDENTIFICATION:**
SePRO Corporation
11550 North Meridian Street, Suite 600
Carmel, IN 46032
www.sepro.com

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

| | | |
|---|---|---|
| Triclopyr ((3,5,6-trichloro-2-pyridinyl)oxy)acetic acid), triethylamine salt | CAS # 057213-69-1 | 44.4% |
| Inert Ingredients, Total, Including | | 55.6% |
| Ethanol | CAS # 000064-17-5 | |
| Triethylamine (N,N-Diethylethanamine) | CAS # 000121-44-8 | |
| Ethylenediaminetetraacetic Acid (EDTA) | CAS # 000060-00-4 | |

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

## 3. HAZARDOUS IDENTIFICATIONS

**EMERGENCY OVERVIEW**
Hazardous Chemical. Light purple-pink liquid, ammonia-like odor. May cause severe eye irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Prolonged or repeated exposure may cause skin irritation, even a burn. $LD_{50}$ for skin absorption in rabbits is >5000 mg/kg; oral $LD_{50}$ for male rats is 2574 mg/kg and 1847 mg/kg for female rats. Toxic and irritating gases may be formed during fire conditions.

**EMERGENCY PHONE NUMBER: 1-800-992-5994**

**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 irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Vapors of amines may cause swelling of the cornea resulting in visual disturbances such as blurred, smoky or halo vision. When tested on animals, dilutions of this material were less irritating to eyes than the undiluted product.

**SKIN:** Prolonged or repeated exposure may cause skin irritation, even a burn. When tested on animals, dilutions of this material were less irritating to skin than the undiluted product. Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals. With the dilute mix, no allergic skin reaction is expected. A single prolonged exposure is not likely to result in the material being absorbed through the skin in harmful amounts. The $LD_{50}$ for skin absorption in rabbits is >5000 mg/kg.

**INGESTION:** Single dose oral toxicity is low. The oral $LD_{50}$ was 2574 mg/kg for male rats and 1847 mg/kg for female rats. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Ingestion may cause gastrointestinal irritation or ulceration.

**INHALATION:** A single brief (minutes) inhalation exposure is not likely to cause adverse effects.

**SYSTEMIC (OTHER TARGET ORGAN) EFFECTS:** Excessive exposure may cause liver or kidney effects.

**CANCER INFORMATION:** Triclopyr did not cause cancer in laboratory animal studies. This material contains ethanol. Epidemiology studies provide evidence that drinking of alcoholic beverages (containing ethanol) is associated with cancer, and IARC has classified alcoholic beverages as carcinogenic to humans.

**TERATOLOGY (BIRTH DEFECTS):** For triclopyr, birth defects are unlikely. Even exposures having an adverse effect on the mother should have no effect on the fetus. Ethanol has been shown to cause birth defects and toxicity to the fetus in laboratory animal tests. It has also been shown to cause human fetotoxicity and/or birth defects when ingested during pregnancy.

**REPRODUCTIVE EFFECTS:** For triclopyr, in laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. Ingestion of large amounts of ethanol has been shown to interfere with fertility in human males.

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## 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:** Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth to an unconscious person.

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

**NOTE TO PHYSICIAN:** Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower GI tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/ esophageal control if lavage is done. If burn is present treat as any thermal burn, after decontamination. Exposure to amine vapors may cause minor transient edema of the corneal epithelium (glaucopsia) with blurred vision, blue haze, and halos around bright objects. Effects disappear in a few hours and temporarily reduce ability to drive vehicles. 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:** 110° F (43° C)
**METHOD USED:** TCC
**FLAMMABLE LIMITS:** LFL: Not determined
UFL: Not determined

**EXTINGUISHING MEDIA:** Alcohol foam and $CO_2$.

**FIRE AND EXPLOSION HAZARDS:** Toxic, irritating vapors may be formed or given off if product is involved in fire. Although product is water-based, it has a flash point due to the presence of small amounts of ethanol and triethylamine.

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

## 6. ACCIDENTAL RELEASE MEASURES

**ACTION TO TAKE FOR SPILLS/LEAKS:** Contain small spills and absorb with an inert material such as clay or dry sand. Report large spills to InfoTrac at 1-800-535-5053.

## 7. HANDLING AND STORAGE

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: HANDLING:** Keep out of reach of children. Causes irreversible eye damage. Harmful if inhaled or absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic skin reaction in some individuals. Avoid contact with eyes, skin, clothing, breathing vapor, or spray mist. Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

**STORAGE:** Store above 28°F or agitate before use. Store in original container. See product label for handling/storage precautions relative to the end use of this product.

## 8. EXPOSURE CONTROL/PERSONAL PROTECTION

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

**EXPOSURE GUIDELINE(S):**
Ethanol (ethyl alcohol): ACGIH TLV and OSHA PEL are 1000 ppm. ACGIH classification is A4.
3,5,6-Trichloro-2-pyridyloxyacetic acid (Triclopyr), triethylamine salt: SePRO Corporation Industrial Hygiene Guideline is 2 mg/$M^3$ as acid equivalent; Skin.
Triethylamine: ACGIH TLV is 1 ppm TWA, 3 ppm STEL, Skin. OSHA PEL is 10 ppm TWA, 15 ppm STEL.

PELs are in accord with those recommended by OSHA, as in the 1989 revision of PELs.

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material. 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.

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**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 a NIOSH approved air-purifying respirator.

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

**EYE PROTECTION:** Use chemical goggles. Eye wash fountain should be located in immediate work area. If vapor exposure causes eye discomfort, use a NIOSH approved full-face respirator.

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**BOILING POINT:** Not determined
**VAPOR PRESSURE:** Not determined
**VAPOR DENSITY:** Not applicable
**SOLUBILITY IN WATER:** Miscible
**SPECIFIC GRAVITY:** 1.135 (68/68°F)
**APPEARANCE:** Light purple/pink liquid
**ODOR:** Ammonia-like odor

## 10. STABILITY AND REACTIVITY

**STABILITY: (CONDITIONS TO AVOID)** Avoid sources of ignition if temperature is near or above flash point.

**INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID)** Any oxidizing agent. Consult manufacturer for specific cases.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Nitrogen oxides and hydrogen chloride may be formed under fire conditions.

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

## 11. TOXICOLOGICAL INFORMATION

**MUTAGENICITY:** For triclopyr and ethanol: in-vitro mutagenicity studies were negative. For triclopyr: animal mutagenicity studies were negative. For ethanol: animal mutagenicity studies were negative in some cases and positive in other cases.

## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL FATE:**
**MOVEMENT & PARTITIONING:** Based largely or completely on information for triclopyr. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**DEGRADATION & PERSISTENCE:** Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). 20-Day biochemical oxygen demand (BOD20) is 0.30 p/p. Theoretical oxygen demand (ThOD) is calculated to be 0.75 p/p.

**ECOTOXICOLOGY:** Material is slightly toxic to aquatic organisms on an acute basis ($LC_{50}/EC_{50}$ is between 10 and 100 mg/L in most sensitive species).
Acute $EC_{50}$ for shell deposition inhibition in Eastern oyster (*Crassostrea virginica*) is 56-87 mg/L.
Acute $LC_{50}$ for rainbow trout (*Oncorhynchus mykiss*) is 400 mg/L.
Acute $LC_{50}$ for channel catfish (*Ictalurus punctatus*) is 446 mg/L.
Acute $LC_{50}$ for pink shrimp (*Penaeus duorarum*) is 895 mg/L.
Growth inhibition $EC_{50}$ for green alga (*Selenastrum capricornutum*) is 45 mg/L.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Do not contaminate food, feed, or water by storage or disposal. Excess wastes are toxic. Improper disposal or excess wastes are a violation of federal law. If wastes resulting from the use of this product cannot be disposed of according to label instructions, dispose of these wastes at an approved facility. Contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

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## 14. TRANSPORT INFORMATION

For DOT regulatory information, if required, consult transportation regulations, product-shipping papers, or contact your SePRO Corporation representative.

## 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 |
|---|---|---|
| N,N-Diethylethanamine | 000121-44-8 | 3% |

**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 |
|---|---|---|
| Ethylenediamine Tetraacetic Acid | 000060-00-4 | NJ3 PA1 PA3 |
| Ethanol | 000064-17-5 | NJ1 NJ3 PA1 |
| N,N-Diethylethanamine | 000121-44-8 | NJ1 NJ3 PA1 PA3 |

NJ1 = New Jersey Special Health Hazard Substance (present at > or = to 0.1%).
PA1 = Pennsylvania Hazardous Substance (present at > or = to 1.0%).
PA3 = Pennsylvania Environmental Hazardous Substance (present at > or = 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:**

| CATEGORY | RATING |
|---|---|
| Health | 3 |
| Flammability | 2 |
| Reactivity | 0 |

**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 Number | RQ | % in Product |
|---|---|---|---|
| Triethylamine | 000121-44-8 | 5000 | 3% |
| Ethylenediaminetetra-acetic Acid (ETDA) | 000060-00-4 | 5000 | 2.3% |

**RCRA Categorization Hazardous Code:**
Triethylamine = U404

## 16. OTHER INFORMATION

**MSDS STATUS:** New 01/22/03

The information herein is given in good faith, but no warranty, express or implied, is made. Consult SePRO Corporation for further Information.

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