

REPAR CORPORATION

MATERIAL SAFETY DATA SHEET

MSDS NUMBER: RC002
MSDS DATE: 04-25-99
PRODUCT NAME: REAP-THRU HERBICIDE

EMERGENCY PHONE: 202-223-1424
24 HOUR EMERGENCY PHONE (CHEMTREC): 1-800-424-9300

I. PRODUCT IDENTIFICATION

MANUFACTURER'S NAME & ADDRESS: Repar Corporation
P.O. Box 4321
Silver Spring, MD. 20914
Telephone: (202-223-1424)

CHEMICAL NAME: Methyl 2-chloro-9-hydroxyfluorene-(9)-carboxylate
plus solvents and emulsifiers
CAS NUMBER: NA (Mixture)

SYNONYMS/COMMON NAMES: Methyl ChlorfluorenoI

CHEMICAL FORMULA: NA

PRODUCT USE: Herbicide, Plant Growth Regulator, Fungicide

DOT PROPER SHIPPING NAME: Combustible Liquid, N.O.S.
DOT HAZARD CLASS: 3
DOT IDENTIFICATION NUMBER: NA 1993
PACKING GROUP: III
DOT HAZARDOUS SUBSTANCE: NA
DOT MARINE POLLUTANT: NA
ADDITIONAL DESCRIPTION REQUIREMENT: NA

CAS = Chemical Abstract Service Number

PEL = OSHA Permissible Exposure Limit

TLV = ACGIH Threshold Limit Value, Current

ND = No relevant information found or not available

CORP = Corporate Exposure Limit

* = See Chronic Effects NA = Not Applicable

IMPORTANT: The information presented herein, while not guaranteed, was prepared by competent technical personnel and is true and accurate to the best of our knowledge. NO WARRANTY, OR GUARANTY, EXPRESS OR IMPLIED IS MADE REGARDING PERFORMANCE, STABILITY, OR OTHERWISE. This information is not intended to be all-inclusive as to the manner and conditions of use, handling and storage. Other factors may involve other or additional safety or performance considerations. While our technical personnel will be happy to respond to questions regarding safe handling and use procedures, safe handling and use remains the responsibility of the customer. No suggestions for use are intended, and nothing herein shall be construed as a recommendation to infringe any existing patents or violate any Federal, State or local laws.

II. HEALTH HAZARD INFORMATION

EMERGENCY AND FIRST AID PROCEDURES

IF SWALLOWED: Call a physician or Poison Control Center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger. Do not give anything by mouth to an unconscious person.

IF ON SKIN: Wash with plenty of soap and water. **Get medical attention.**

IF IN EYES: Immediately flush with plenty of water for at least 25 minutes. Call a physician.

Note to Physician: Causes reversible corneal opacity. Treat symptomatically.

ROUTES OF EXPOSURE

INHALATION: Breathing of spray mist is expected to be a primary route of exposure and may produce nose, throat and respiratory tract irritation.

SKIN: Dermal contact is expected to be a primary route of exposure and can cause skin irritation. Not considered a sensitizing agent.

EYE CONTACT: May result in corrosion to the eyes or reversible eye damage.

INGESTION: May cause dulling of senses

TOXICOLOGY DATA:

Oral LD ₅₀ (rat): 2.8 g/kg	Eye irritation (rabbit)	Irritant
Dermal LD ₅₀ (rabbit): > 2.0 g/kg	Skin irritation (rabbit)	Slight Irritant
Inhalation LC ₅₀ (rats): 7.23 mg/l	Eye irritation - use dilution (rabbit)	Not Irritant

Administration of up to 300ppm (active ingredient) in the diet of beagles produced no detectable adverse effects two years. Up to 1000ppm in the diet of rats for 52 weeks produced no detectable adverse effects. Overexposure to the solvents present in the formulation may cause adverse effects to the central nervous system.

III. IMPORTANT COMPONENTS

CAS NUMBER/ NAME

2536-31-4 Methyl-2-chloro-9-hydrofluorene-(9)-carboxylane

EXPOSURE LIMITS PERCENTAGE

PEL: Not Established	VOL ND
TLV: Not Established	WT 15.9%

COMMON NAMES:

Chlorflurenol methylester

All components of this product that are required to be on the TSCA Inventory are listed on the inventory.

IV. FIRE AND EXPLOSION DATA

FLASH POINT: 236° F (Open Cup) AUTOIGNITION TEMPERATURE: 454° C

FLAMMABLE LIMITS IN AIR, % BY VOLUME- UPPER: ND
LOWER: ND

EXTINGUISHING MEDIA:

In case of fire or smoke, call the fire department. Do not attempt to extinguish the fire without a self contained breathing apparatus (SCBA). Do not let the fire burn. Flood with copious amounts of water. Use water fog, foam, or CO₂.

SPECIAL FIRE FIGHTING PROCEDURES:

Firefighters should wear full protective clothing and self-contained breathing apparatus (SCBA) to protect against inhalation of combustion products.

UNUSUAL FIRE AND EXPLOSION HAZARD:

Emits toxic fumes of carbon monoxide, carbon dioxide. During fire, hydrochloric acid may be formed.

V. SPECIAL PROTECTION

VENTILATION REQUIREMENTS:

Sufficient ventilation to minimize exposure to vapor.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- A. Long-sleeved shirt and long pants.
- B. Chemical-resistant gloves, such as barrier laminate or viton
- C. Shoes plus socks
- D. Protective eye wear

OTHER CLOTHING AND EQUIPMENT: Emergency shower and eyewash facilities should be in close proximity (ANSI Z358.1). Launder contaminated clothing and wash hands and face after use. Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

RESPIRATORY: NIOSH/MSHA approved respirator, following manufacturer's recommendations, should be used as a precautionary measure where airborne contaminants may occur. (OSHA Standard 29 CFR §1910. 134).

EYE: Wear chemical safety goggles (ANSI Z87.1).

GLOVES: Wear chemical resistant gloves.

VI. PHYSICAL DATA

APPEARANCE AND ODOR: Brown colored, mild amine-like odor

MELTING POINT: NA

Boiling Point: 320°

SOLUBILITY:

Water: Miscible

Specific Gravity (H₂O = 1): 1.132

Vapor Pressure @ 20° C: ND

ODOR THRESHOLD (ppm): No data

Vapor Density (Air = 1): ND

pH: ND

Freezing Point: ND

VII. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY: Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS:

Toxic fumes of carbon monoxide, carbon dioxide and possibly hydrochloric acid.

VIII. HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS:

- Do not get into eyes, on skin, on clothing.
- Wear goggles or face shield and chemical resistant gloves when handling.
- Avoid breathing spray mist or fumes.
- Wash thoroughly with soap and water after handling.
- Remove and wash contaminated clothing before reuse.

STORAGE: Store in cool, dry area away from heat or open flame.

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container. Store above 4°C.

Do not contaminate water, food, or feed by storage or disposal.

DIRECTIONS FOR USE:

It is a violation of Federal Law to use this product in a manner inconsistent with it's labeling.

Do not apply this product through any irrigation system. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

IX. ENVIRONMENTAL PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Follow protective measures indicated in the Special Protection Section of this MSDS.

In case of spillage, absorb with corn cobs, absorbent clay or similar materials. Sweep up and dispose. Avoid personal contact.

Storage: Do not contaminate water, food, or feed by storage or disposal. Store in original container in a locked storage area. Avoid temperatures below 41°F. In case of accidental storage below 41°F, allow to thaw in original container at 50 - 80°F and agitate in container before using. Avoid long term storage above 122°F as some separation of ingredients may occur. Agitate in original container before using if exposure to prolonged high temperature is suspected.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

ENVIRONMENTAL EFFECTS: N/A

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.

X. ADDITIONAL INFORMATION

OSHA Standard 29 CFR §1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

PESTICIDE REGISTRATION INFORMATION
U.S. EPA Registration No. 69361-1

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XI. PREPARATION INFORMATION

For additional Non-Emergency health, safety, or environmental information, telephone (202) 223-1424, or write to:

REPAR CORPORATION
P.O. Box 4321
Silver Spring, MD. 20914
Attention: Dr. N. Mandava