



SAFETY DATA SHEET

center or doctor, or going for treatment. For Medical Emergency Assistance, call the National Pesticide Information Center 1-800-858-7378.

1. Product Identification:

Product Name: REAP-THRU HERBICIDE

Manufacturer: Repar Corporation
Telephone: 202-223-1424
Address: P.O. Box 4321
City, State, Zip: Silver Spring, MD 20914
Emergency Phone: 202-223-1424 (Monday-Friday, 10:00 a.m. – 6:00 p.m.)
24 Hour Emergency Phone (CHEMTREC): 1-800-424-9300
U.S. EPA Registration No.: 69361-1
Product Use: Plant Growth Regulator

2. Health Hazard(s) Identification:

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

Amber Colored Clear Liquid with a Weak Caramel Odor

HEALTH HAZARDS: CAUTION! Causes substantial but temporary eye injury.

PHYSICAL HAZARDS: May release toxic fumes if burned.

ENVIRONMENTAL HAZARDS: Moderately toxic to aquatic organisms.



3. Composition/Ingredient Information:

Active Ingredients:	CAS Number	Percentage by Weight
Methyl 2-chloro-9-hydroxy-9H-fluorene-9-carboxylate	2536-31-4	11.0%
Methyl 2,7-dichloro-9-hydroxy-9H-fluorene-9-carboxylate	21634-96-8	2.0%
Methyl 9-hydroxy-9H-fluorene-9-carboxylate	1216-44-0	2.9%
Common Name for Mixture of Active Ingredients: Chlorflurenol Methyl Ester (CFM)	37339-61-0	15.9%

Other Ingredients:
Organic solvents and emulsifiers N/A 84.1%

*Inert ingredient identity is confidential business information

4. First Aid Measures:

If in Eyes:

- Hold eye open and rinse slowly with a steady, gentle stream of water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing the eye.
- Call a poison control center or doctor for treatment advice.

If Swallowed:

- 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 by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

If On Skin Or Clothing:

- 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.

If Inhaled:

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably, mouth-to-mouth, if possible.
- Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control

NOTE TO PHYSICIAN: No specific antidote. Causes reversible corneal opacity. Treat symptomatically. **Probable mucosal damage may contraindicate the use of gastric lavage.**

5. Fire Fighting Measures:

EXTINGUISHING MEDIA: Use water fog, foam, or CO₂

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Emits toxic fumes of carbon monoxide and carbon dioxide. During fire, hydrochloric acid may be formed.

SPECIAL PROTECTIVE ACTIONS FOR FIRE FIGHTERS: Firefighters should wear full protective clothing and self-contained breathing apparatus (SCBA) to protect against inhalation of combustion products. Do not let the fire burn. Flood with copious amounts of water.

6. Accidental Release Measures:

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

PERSONAL PRECAUTIONS: Follow protective measures indicated in Section 8: Exposure Control/Personal Protection for both emergency and non emergency personnel.

ENVIRONMENTAL PRECAUTIONS: Keep spilled liquid away from drains, surface and ground water.

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

7. Handling and Storage:

HANDLING AND STORAGE PRECAUTIONS:

HANDLING: 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. Avoid contact with strong oxidizing agents through handling. Avoid unintentional spilling or release into environment.

STORAGE: Do not contaminate water, food, or feed by storage. 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.

8. Exposure Control/Personal Protection:

EXPOSURE GUIDELINES: Occupational exposure limit (OEL) and biological limit values (BLV) for Chlorflurenol – CAS No.: 37339-61-0 not established. Control banding approach not available.

APPROPRIATE ENGINEERING CONTROLS: Use sufficient ventilation to avoid buildup of vapors

WORK/HYGIENE PRACTICES: 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.

The following personal protective equipment should be used in conjunction with exposure control measures

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

SKIN PROTECTION: Long-sleeved shirt and long pants as well as shoes plus socks should be worn.

RESPIRATORY PROTECTION: 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).

HAND PROTECTION: Waterproof gloves

9. Physical & Chemical Properties:

APPEARANCE: Amber (yellow) colored clear liquid
ODOR: Weak caramel odor
ODOR THRESHOLD: ND
pH: NA
MELTING POINT: NA


BOILING POINT:	NA
FLASH POINT:	236°F (Open Cup)
EVAPORATION RATE:	ND
FLAMMABILITY (solid, gas):	not flammable
LOWER FLAMMABILITY LIMIT:	ND
UPPER FLAMMABILITY LIMIT:	ND
VAPOR PRESSURE:	NA
VAPOR DENSITY:	ND
RELATIVE DENSITY (H₂O = 1):	1.01 @ 77°F
PARTITION COEFFICIENT (n-octanol/water):	NA
AUTO-IGNITION TEMPERATURE:	849.2°F
DECOMPOSITION TEMPERATURE:	ND
VISCOSITY:	~20 cps
SOLUBILITY:	Forms emulsion in water

10. Stability & Reactivity:

REACTIVITY: Unknown
STABILITY: Stable under normal storage conditions.
HAZARDOUS REACTIONS: None known
CONDITIONS TO AVOID: Heat or open flame
INCOMPATIBLE MATERIALS: Strong oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS: Toxic fumes of carbon monoxide, carbon dioxide and possibly hydrochloric acid.

11. Toxicological Information:

Toxicological Data for Reap-Thru Herbicide:

Oral LD ₅₀ (rat):	2,800 mg/kg bw
Dermal LD ₅₀ (rabbit):	>2,000 mg/kg bw
Inhalation LC ₅₀ (rat):	>2.18 mg/L over 4 h 
Skin irritation (rabbit):	Slight irritant
Skin sensitization (guinea pig):	Not sensitizing
Eye irritation (rabbit):	Irritant
Specific target organ toxicity (STOT):	
STOT-single exposure:	ND
STOT-repeated exposure:	ND
Aspiration hazard:	ND

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.

ADVERSE EFFECTS AND SYMPTOMS: ND

DELAYED OR IMMEDIATE EFFECTS FROM SHORT OR LONG TERM EXPOSURE: ND

NUMERICAL MEASURES OF TOXICITY: ND

INTERACTIVE EFFECTS: ND

Toxicological Data for CFM Technical:

Mutagenicity:	Found to be non-mutagenic.
Carcinogenicity:	Not a carcinogen.
Reproductive Toxicity:	Does not show any developmental toxicity.

12. Ecological Information:

Ecological Data for CFM Technical:

LC ₅₀ (96 h)	Bluegill sunfish	7.45 mg/L
EC ₅₀ (48 h)	Daphnia magna	22.4 mg/L
LC ₅₀ (96 h)	Rainbow trout	5.91 mL/kg

PERSISTENCE AND DEGRADABILITY: 99% is gone from soil after application.

Hydrolyzes readily and rapidly under basic conditions.

BIOACCUMULATIVE POTENTIAL: ND

MOBILITY IN SOIL: Movement of CFM in soil is slight while degradation product is very mobile.

13. Disposal Considerations:

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

PESTICIDE DISPOSAL: Pesticides wastes are acutely hazardous. Open dumping is prohibited. 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. Pesticide spray mixture or rinsate water that cannot be used according to label instructions must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

Nonrefillable containers 5 gallons or less: Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable container 5 gallons or less:

Container disposal: Refillable container: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of this container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Nonrefillable containers of 5 gallons or larger:

Do not reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, an rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

14. Transport Information:

SHIPPING DESCRIPTION:

(Ground transport)

Containers ≤ 119 gallons – Not regulated by USDOT

Containers > 119 gallons – NA1993, Combustible liquid, N.O.S. (contains petroleum distillate), PG III

DOT HAZARD CLASS: Combustible liquid, N.O.S.

IDENTIFICATION NUMBER: NA1993

DOT PACKING GROUP: PG III

15. Regulatory Information:

This chemical is a pesticide product registered with the U.S. Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

Following is the hazard information as required on the pesticide label:

CAUTION

Harmful if inhaled. Avoid breathing spray mist.

16. Other Information:

HMIS HAZARD RATING	HEALTH	2
	FLAMMABILITY	2
	PHYSICAL HAZARD	0
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	



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This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA APPROVED PRODUCT LABELING (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling.

It is a violation of federal law to use a pesticide product in any manner not prescribed on the EPA-approved label.

REVISED DATE: June 2, 2015

REFERENCE: Revised for GHS compliance