

MATERIAL SAFETY DATA SHEET

Phoenix Environmental Care, LLC
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General Information No. 229-245-8845
In Case of Emergency, Call
PROSAR: 888-875-1724
CHEMTREC: 800-424-9300

I. PRODUCT IDENTIFICATION

Product name: Thrasher
Active Ingredient: Ethofumesate (42.0%)
Chemical Name: (2-ethoxy-2,3-dihydro-3,3-dimethyl-5-benzofuranyl methanesulfonate)

II. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS number	% by Wt.	OSHA PEL	ACGIH TLV
Ethofumesate	26225-79-6	42.0	Not established	Not established
Ethylene glycol	107-21-1	8.0	Not established	Not established

III. HAZARDS IDENTIFICATION

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

EMERGENCY OVERVIEW

Keep out of reach of children.

Caution. May cause slight irritation to the eyes, skin and respiratory tract.

POTENTIAL HEALTH EFFECTS

Acute Effects

Based on single exposure animal studies, it is considered to be slightly irritating to eyes and skin. Overexposure to mist or vapor may cause slight irritation to the upper respiratory tract and eyes. Repeated or prolonged skin contact may cause mild irritation.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters or rinsate.

IV. FIRST AID MEASURES

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 do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

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

V. FIRE FIGHTING MEASURES

Flash point (method):	Does not flash.
Flammable limits (LFL-UFL):	LFL: Not applicable UFL: Not applicable
Fire and Explosion Hazards:	No information available.
Extinguishing Media:	Use foam, dry chemical, carbon dioxide, or water spray when fighting fires involving this material.
Fire Fighting Instructions:	Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.
Fire Fighting Equipment: Hazardous Combustion Products:	In the event of fire, wear self-contained breathing apparatus. No information available.

VI. ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin and eyes.
Environmental Precautions:	Keep material out of lakes, streams, ponds, and sewer drains. Dike to confine spill and soak up with an absorbent such as clay, sand, or soil. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.
Methods for Clean-Up:	Soak up with inert absorbent material (i.e., sand, silica gel, acid binder, universal binder, sawdust). Sweep up and shovel into suitable containers for disposal.

VII. HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN!

Handling:	Avoid contact with skin and eyes. Do not eat, drink or use tobacco when using this product.
Storage:	Store in original container in a well ventilated, cool/dry place.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Refer to Section III of this MSDS.

Engineering Controls: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart. All mixers, loaders, applications, and other handlers must wear:

- Long sleeved shirt,
- Long pants,
- Shoes plus socks, and
- Chemical resistant gloves (except flaggers, or applicators in cockpits, and enclosed cabs)
- See engineering controls for additional requirements.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

IX. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Creamy white liquid
Odor:	Faint sulfur odor.
pH:	Not available
Specific Gravity	1.14 g/mL (Technical)
Vapor Pressure:	Not available.
Water Solubility:	110 mg/L (Technical)

X. STABILITY AND REACTIVITY

Chemical Stability:	Stable under recommended storage conditions.
Conditions to Avoid:	Avoid exposure to high moisture conditions for prolonged periods.
Incompatibility:	None known.
Hazardous Decomposition Products:	None under normal use.
Hazardous Polymerization:	Product will not undergo polymerization.

XI. TOXICOLOGICAL INFORMATION

The data below are based on similar formulation. Non-acute information is based on the technical active ingredient, ethofumesate.

Acute Toxicity:

Oral LD ₅₀ (rat):	> 2100 mg/Kg
Dermal LD ₅₀ (rat):	> 4100 mg/Kg
Inhalation:	No data available; Low toxicity is expected for this formulated product as indicated by the LC ₅₀ of the technical grade active ingredient, ethofumesate (4 hour dust (rat): > 4 mg/L).

Skin irritation (rabbit):	Non-irritant.
Eye Irritation (rabbit):	Slight or negligible irritant
Sensitization (guinea pig):	Non-sensitizing

Chronic Toxicity:

Ethofumesate: In two year feeding studies with animals, adverse effects were only observed at very high doses. These include, a reduced weight gain in males and increased liver weight in females (rats 5000 ppm); an increase of liver weight in females (hamsters, 2000 ppm); an increased liver weight in both males and females (dogs, 20,000 ppm).

Carcinogenicity:

Ethofumesate has been classified by EPA as not likely to be carcinogenic to humans based on the lack of carcinogenicity in mice as well as lacking any evidence in rats and no evidence of genotoxicity.

Reproductive and development toxicity:

Demonstrated no adverse effects on reproduction in a three generation rat reproduction study. Ethofumesate was not a developmental toxicant in rats. In rabbits, developmental effects (incomplete ossifications) were observed at a non-maternally toxic dose. No malformations were observed even at the highest dose.

Tertogenicity: No teratogenic effects were seen in rats at dose levels up to 8-0 mg/kg/day. In rabbits, no adverse effects of biological significance were observed at the low dose (30 mg/kg/day) slight embryo lethal effects were noted at 300 mg/kg/day; severe maternal toxicity and moderate embryo lethal effects were observed at the highest dose.

XII. ECOLOGICAL INFORMATION

Environmental Summary

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

Bioaccumulations (Technical): Bluegill sunfish BCF: 67-144

XIII. DISPOSAL CONSIDERATIONS

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 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: Non-refillable container. Do not reuse or refill this container. Triple rinse (or equivalent), promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a 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. Offer for recycling, if available or reconditioning, if appropriate. Then puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

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

XIV. TRANSPORT INFORMATION

DOT Classification: Not regulated by DOT

XV. REGULATORY INFORMATION

International Inventories

Ethylene Glycol
 DSL Listed
 EINECS/ELINCS Listed
 ENCS Listed
 CHINA Listed
 KECL Listed

Ethofumesate
 EINECS/ELINCS Listed

USA

SARA TITLE III STATUS:

311/312 Hazard Categories
 Chronic Health Hazard No
 Acute Health Hazard Yes
 Fire Hazard No
 Sudden Release of Pressure Hazard No
 Reactive Hazard No

313 Toxic Chemicals Yes
 Ethylene Glycol (8%), CAS No. 107-21-1

Clean Water Act

Section 112 Hazardous Air Pollutants (HAPs), 40 CFR 61
 This product contains the following HAPs:

Chemical Name	CAS No.	Weight %	HAPs Data	VOC Chemicals
Ethylene Glycol	107-21-1	8	Listed	Listed

CERCLA

Ethylene Glycol, RQ: Listed

RCRA

Pesticide Information
 State Regulations

CALIFORNIA PROP 65: Not listed

State Right-To-Know:

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethylene Glycol	Listed	Substance No. 0878 Listed	Listed	Listed	Listed

International Regulations
Mexico-Grade

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class: Not determined

Chemical Name	NPRI
Ethylene Glycol	X

XVI. OTHER INFORMATION

CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Phoenix Environmental Care, LLC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Phoenix Environmental Care, LLC and Seller harmless for any claims relating to such factors.

Phoenix Environmental Care, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Phoenix Environmental Care, LLC and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, Phoenix Environmental Care, LLC MAKES NEITHER WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

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