

Material Safety Data Sheet

Effective Date: 29-JAN-2004
Product: TREFLAN 4EC

I. IDENTIFICATION

Chemical Name: Trifluralin
Chemical Family: Dinitroaniline
Formula: Not applicable, formulated mixture.
Synonyms: Trifluralin HFP
CAS Number: Not applicable, formulated mixture.
EPA Number: 5905-532

II. PHYSICAL DATA

Boiling Point: >450 Degrees F.
Freezing Point: <40 Degrees F.
Spec Gravity: 1.120 gms/cc
Vapor Pressure: <1 mm/Hg @ 68 Deg F.
Vapor Density: 4.7 relative to air
Solubility: Emulsifies
Volatiles: Approximately 25%
Evaporation: 0.03
Melting Point: Not applicable
Appearance: Clear, deep orange liquid; aromatic odor.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
Trifluralin - 96%	1582-09-8	43.00	N/E	Skin & eye irritant; Skin sensitizer
Other ingredients, including aromatic petroleum and naphthalene (in solvent)	64742-94-6	57.00	50 mg/m3	Skin & eye irritant

IV. FIRE AND EXPLOSION HAZARD

Flash Point: 210 Degrees F. (PMCC)
Autoignition Temp: >800 Degrees F.
Flammable Limit: 1.8% - 11.8%
Extinguishing Media: Dry chemical, carbon dioxide, water and foam.
Special Fire Fight Proc: Wear self-contained breathing apparatus with full face positive pressure mode and full firefighting protective clothing.
Fire and Expl Hazard: Containers exposed to intense heat from fires should be kept cool with water spray to

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prevent containers from weakening or
rupturing. Contain water runoff if possible.

V. HEALTH HAZARD

Carcinogen Information: None currently known.

ACUTE EFFECTS OF OVER EXPOSURE

Swallowing: Trifluralin is considered only slightly toxic. However, the solvent may cause poisoning if ingested. The Acute Oral LD50 (rats) = 3,700 mg/kg.
Skin Absorption: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.
Inhalation: Excessive exposure may cause irritation to the upper respiratory tract and lungs. The Acute Inhalation LC50 (rats) = 5.59 mg/L for 4 hours.
Skin contact: Prolonged or repeated exposure may cause skin irritation. May cause allergic skin reactions in susceptible individuals.
Eye Contact: May cause moderate eye irritation with contact. Corneal injury is not likely.
Chronic Effects: May cause skin irritation and rash; nausea, vomiting, cramping and diarrhea; eye irritation; dizziness, headache, fever or chills; and muscle aches or weakness.
Other Hazard: Individuals with known hypersensitivity to trifluralin should not be exposed. Individuals with allergic history or pre-existing dermatitis should use extra care in handling trifluralin.

EMERGENCY AND FIRST AID PROCEDURES

Swallowing: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
Skin: Remove contaminated clothing. Wash affected area with soap and water. If irritation develops or persists, consult a physician.
Inhalation: Remove from exposure area. If breathing has stopped, perform artificial respiration. Obtain immediate medical attention.
Eyes: Flush eyes with water for at least 15 minutes,

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Notes to Physician: holding eyelids open. If irritation develops or persists, consult a physician. There is no specific antidote for this mixture. Treatment should be based on the judgment of the physician in response to reactions of the patient. This product contains aromatic hydrocarbons and can be extremely harmful if swallowed. If this happens and the patient is conscious, immediately administer activated charcoal (6-8 heaping teaspoonfuls) with water. Do not give anything by mouth to an unconscious person. Gastric lavage with a cuffed endotracheal tube to prevent aspiration and should be completed within 15 minutes. In the absence of depression, convulsions or impaired gag reflex, vomiting can be induced with blunt instrument or finger. Make certain vomit is not inhaled by raising hips higher than head. If patient is unconscious, do not induce vomiting.

VI. REACTIVITY

Stability: Stable
Conditions to Avoid: Avoid freezing.
Polymerization: Will Not Occur
Conditions to Avoid: None currently known.
Incompatibility material: Avoid contact with strong oxidizing agents.
Hazardous Combustion: May produce fluorine compounds or oxides of nitrogen. Incomplete combustion may produce carbon monoxide.

VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc: Isolate contaminated area and contain the spill. Absorb spilled material with clay or sawdust and put into suitable containers for disposal. Do not contaminate water supplies with waste or cleanup materials. This material is toxic to fish.
Waste Disposal Method: This material must be disposed of according to Federal, State or Local procedures under the Resource Conservation and Recovery Act.

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VIII. SPECIAL PROTECTION INFORMATION

Respiration: If work area is not well-ventilated, use a NIOSH-approved respirator with organic vapor cartridge.
Ventilation: Maintain odor free atmosphere. Use mechanical devices if ventilation is not adequate.
Gloves: Impervious gloves.
Eyes: Chemical workers' goggles.
Other: Use coveralls, impervious apron and footwear. A safety shower and eyewash should be provided in work area.

IX. SPECIAL PRECAUTIONS

Special precaution: Keep out of reach of children. Do not store with food, feed or other material to be used or consumed by humans or animals. Do not contaminate water supplies, lakes, streams or ponds. Do not mix with any material not specified on the product label. End-use Product: This pesticide is toxic to fish. Do not apply to water or wetlands. Drift or runoff from treatment areas may be harmful to aquatic organisms in neighboring aquatic sites. Do not contaminate water supplies when disposing of equipment wash waters or rinsate.
Other precaution: A) RCRA Hazardous Waste Code: U165 - Naphthalene
B) SARA Title III, Section 313: Trifluralin (43%), Naphthalene (4.2%)
C) CERCLA Reportable Quantity: 2.5 gallons (10 lbs.)
D) 49 CFR 172.101, Appendix A: Hazardous Substance
E) 49 CFR 172.101, Appendix B: Marine Pollutant

X. SHIPPING INFORMATION

Shipping name: RQ, Environmentally hazardous substance, liquid, n.o.s. (Trifluralin), 9, UN3082, PG III "ERG # 171"
Hazard Class: Class 9
Identification No: UN3082
Labels Required: Class 9

Helena Chemical Company
PH: 901-761-0050
CHEMTREC: 800-424-9300

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Placarding: Class 9
Freight Class: Compound, Weed Killing, Liquid, (Herbicide),
N.O.I. (NMFC Item 50320, Class 60)

Chemical Name	Equivalent R.Q.
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Trifluralin (CAS 1582-09-8)	10 lbs./4.54 kg
Naphthalene (CAS 91-20-3)	100 lbs./45.4 kg

TRANSPORTATION NOTE:

If container >119 gallons, must be labeled Class 9, UN3082 and Marine
Pollutant. Add "Marine Pollutant" to shipping name.

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:

(Rating level: 4-Extreme, 3-High, 2-Moderate, 1-Slight, 0-Minimum)

Health: 2 Fire: 2 Reactivity: 1

S.A.R.A. Title III Hazard Classification: (Yes/No)

Immediate (Acute) Health: Y	Delayed (Chronic) Health: Y
Sudden Release of pressure: N	Fire: Y
Reactive: N	

Mail inquiries to: 225 Schilling Blvd., Suite 300 Collierville, TN 38017
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