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Helena Chemical Company 29-OCT-2004 11:32:55 PH: 901-761-0050 CHEMTREC: 800-424-9300

Material Safety Data Sheet

Effective Date: 29-OCT-2004

Product: HELENA PENDIMETHALIN

I. IDENTIFICATION

Chemical Name: Pendimethalin Chemical Family: Dinitroaniline

Formula: Not applicable, formulated mixture.

Synonyms: None

CAS Number: 40487-42-1 (pendimethalin)

EPA Number: 241-337-5905

II. PHYSICAL DATA

Boiling Point: 244 Degrees C. Freezing Point: Not determined Spec Gravity: 1.06 g/mL Vapor Pressure: 5.6 mm/Hg Vapor Density: Not determined Solubility: Emulsifiable Volatiles: Not determined Evaporation: Not determined Melting Point: Not applicable

Appearance: Dark amber liquid with aromatic odor.

III. INGREDIENTS

Material	CAS Number	Percent	TLV	Hazard
Pendimethalin	40487-42-1	37.40	3 mg/m3	Skin & eye irritant
Petroleum Solvent, including Naphthalene	64742-94-5	51.90	15 ppm	Slight eye & moderate skin irritant
Inert ingredients, including Ethylene dichloride		10.70	10 ppm	Skin irritant

IV. FIRE AND EXPLOSION HAZARD

Flash Point: 208 Degrees F. (SETA)

Autoignition Temp: 375 Degrees C. Flammable Limit: Not determined

Extinguishing Media: Use water fog, foam, carbon dioxide or dry

chemical extinguishing agents.

Special Fire Fight Proc: Wear self-contained breathing apparatus and

full protective clothing.

Fire and Expl Hazard: None known. Material decomposes at 244 Degrees C.

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V. HEALTH HAZARD

Carcinogen Information: Ethylene dichloride - IARC 2B

ACUTE EFFECTS OF OVER EXPOSURE

Swallowing: Harmful if swallowed.

Skin Absorption: Harmful if absorbed through skin. Prolonged

skin contact may irritate skin and cause

dermatitis.

Inhalation: Inhalation of vapors or spray mist is

irritating to the respiratory tract. May cause headache, dizziness, anesthesia, drowsiness,

unconsciousness and other CNS effects,

including death. Severe pulmonary injury may

occur if aspirated.

Skin contact: Prolonged skin contact may irritate skin and

cause dermatitis. May aggravate any pre-

existing skin conditions.

Eye Contact: Contact causes moderate eye irritation.

Chronic Effects: Chronic exposure to naphthalene, such as is

found in the petroleum solvent, may result in

liver and/or kidney disorders.

Other Hazard: None currently known.

EMERGENCY AND FIRST AID PROCEDURES

._____

Swallowing: Call a poison control center or doctor immediately for treatment advice. Sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by doctor. Get

immediate medical treatment.

Skin: Remove contaminated clothing. Wash skin with plenty of water for 15 to 20 minutes. Call a physician or poison control center for

treatment advice.

Inhalation: Move to fresh air. If not breathing, call 911 and give artificial respiration, preferably mouth-to-mouth. Call a poison control center or

doctor for further treatment advice.

Eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. If contact lenses present, remove after first 5 minutes, then continue rinsing. Call a poison control center

or doctor for treatment advice.

Notes to Physician: Contains petroleum distillate. Vomiting may

cause aspiration pneumonia. Because of

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increased risk of chemical pneumonia or pulmonary edema caused by aspiration, vomiting should be induced only under professional supervision. Pendimethalin is a strongly orange-red compound - virtually an aniline dye. Cases have been described of urine coloration following heavy exposure. Despite its structure as both a nitro-compound and aromatic amine, exposure to pendimethalin is NOT associated with methemoglobinemia.

VI. REACTIVITY

Stability: Stable

Conditions to Avoid: Do not store below 40 Degrees F. or above 120

Degrees F.

Polymerization: Will Not Occur

Conditions to Avoid: Does not polymerize.

Incompatibility material: Oxidizing agents and strong alkali. Store in

cool, dry, well-ventilated place away from

ignition sources, heat or flame.

Hazardous Combustion: Including but not limited to oxides of carbon

and nitrogen.

VII. SPILL OR LEAK PROCEDURES

Spill or Leak Proc: For large spills: Avoid contact, isolate area

and keep out animals and unprotected persons; call CHEMTREC (1-800-424-9300). For small spills: Dike and contain with an inert material

(dirt or sand). Collect and place in chemical

waste containers for proper disposal.

Waste Disposal Method: This material must be disposed of according to

Federal, State or Local procedures under the

Resource Conservation and Recovery Act.

VIII. SPECIAL PROTECTION INFORMATION

Respiration: Supplied air if large quantities of mist/dust

generated.

Ventilation: Provide mechanical ventilation to reduce

potential exposure.

Gloves: Chemical-resistant Eyes: Chemical goggles

Other: Eyewash station, emergency shower, impervious

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apron and footwear.

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. This mixture is toxic to fish and very

toxic to aquatic plants.

Other precaution: RCRA Hazardous Waste Code: D028 (other codes

may apply)

X. SHIPPING INFORMATION

Shipping name: Not regulated by DOT in containers less than

155 gallons.

Hazard Class: None Identification No: None

Labels Required: None required

Placarding: None

Freight Class: Compound, Weed Killing, Liquid (Pendimethalin

Herbicide), N.O.I. (NMFC Item 50320, Class 60)

Equivalent R.Q. Chemical Name

_____ _____

100 lbs. Naphthalene (CAS No. 91-20-3)

TRANSPORTATION NOTE:

If container > 155 gallons, ship as follows:

RQ, Environmentally hazardous substance, liquid, n.o.s. (Naphthalene), 9, UN3082, PG III "ERG # 171"

XI. GENERAL PRODUCT INFORMATION

National Fire Protection Association Rating:

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

Fire: 1 Health: 1 Reactivity: 1 Helena Chemical Company 29-OCT-2004 11:32:55 PH: 901-761-0050 Page 5 Of 5

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

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

Reactive: N

Mail inquiries to: 225 Schilling Blvd., Suite 300 Collierville, TN 38017 Helena Chemical Company believes that the data contained herein is factual. This data is not to be taken as a warranty or representation of legal responsibility. It is offered solely for your consideration, investigation and verification.