

# SAFETY DATA SHEET

# HARBINGER® HERBICIDE

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL CHEMTREC - DAY OR NIGHT 1-800-424-9300

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### FORMULATED FOR:

LOVELAND PRODUCTS, INC.  
P.O. Box 1286 • Greeley, CO 80632-1286

**24-Hour Emergency Phone:** 1-800-424-9300  
**Medical Emergencies:** 1-866-944-8565  
**U.S. Coast Guard National Response Center:** 1-800-424-8802

**PRODUCT NAME:** HARBINGER® HERBICIDE  
**CHEMICAL NAME:** Pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine  
**CHEMICAL FAMILY:** Dinitroaniline Herbicide  
**EPA REG. NO.:** 241-337-34704  
**MSDS Number:** 241337-13-LPI

**MSDS Revisions:** Section 15

**Date of Issue:** 04/30/13

**Supersedes:** 03/22/10

## 2. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN – CAUTION - PRECAUCIÓN** – Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.) Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing.

This product is a dark amber liquid with moderate aromatic odor. Primary routes of entry are inhalation and skin contact.

## 3. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Pendimethalin	37.40	40487-42-1	not listed
Other Ingredients, including Aromatic solvent	62.60	64742-94-5	not listed
Naphthalene		91-20-3	52 mg/m <sup>3</sup>

## 4. FIRST AID MEASURES

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. **DO NOT** give any liquid to person. **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. **DO NOT** give anything by mouth to an unconscious person.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**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 for treatment advice.

**NOTE TO PHYSICIAN:** Because of increased risk of chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent, vomiting should be induced only under professional supervision.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.** Have the product label or container with you when calling a poison control center or doctor, or going for treatment.

## 5. FIRE FIGHTING MEASURES

**FLASH POINT (°F/Test Method):** ~208°F / ~97.8°C.  
**FLAMMABLE LIMITS (LFL & UFL):** Not established.  
**EXTINGUISHING MEDIA:** Foam, dry powder, carbon dioxide (CO<sub>2</sub>), or water spray.  
**HAZARDOUS COMBUSTION PRODUCTS:** Oxides of nitrogen, oxides of carbon, toxic vapors.  
**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained breathing apparatus with full protective clothing. Evacuate area and fight fire from a safe distance. Minimize the amount of water used for firefighting. Equipment should be completely decontaminated after use.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** If water is used to fight fire or cool containers, contain runoff, using dikes to prevent contamination of water supplies. Dusts will form explosive mixtures with air and sustain flame when in contact with fire. May decompose at high temperatures and give off poisonous oxides. Avoid using heavy water streams.

## 6. ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

For small spills, absorb with an absorbent material such as pet litter. Sweep up and transfer to containers for possible land application according to label use or for proper disposal. Wash the spill with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container and handle in an approved manner. Check local, state and federal regulations for proper disposal. Flush the area with water to remove any residue. For large spills: contain liquid by diking the area, keep product out of water supplies. Any recovered spilled liquid should be similarly collected and disposed of.

**CAUTION:** Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**7. HANDLING AND STORAGE**

**HANDLING:** 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. If pesticide comes in contact with skin, wash off with soap and water.

**STORAGE:** DO NOT STORE BELOW 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of the container. If crystallization does occur, store the container on its side at room temperature (70°F) and rock occasionally until crystals redissolve. Do not contaminate water, food or feed by storage or disposal.

**Personal Protective Equipment (PPE): Applicators and other handlers must wear:** long sleeved shirt and long pants, chemical-resistant gloves made of waterproof materials, such as barrier laminate, butyl rubber > 14 mils, nitrile rubber > 14 mils, neoprene rubber > 14 mils, or Viton® > 14 mils and shoes and socks. Follow manufacturer's instructions for cleaning and maintaining PPE. If no instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**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)(46)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**RESPIRATORY PROTECTION:** Wear a NIOSH approved dust/mist filtering respirator (approval number prefix TC-23C) when using in an area with inadequate ventilation.

**EYE PROTECTION:** Chemical goggles or shielded safety glasses.

**SKIN PROTECTION:** Wear protective clothing: coveralls over long-sleeved shirts and pants, shoes plus socks. Wear waterproof gloves.

	OSHA PEL 8 hr TWA	ACGIH TLV-TWA
Naphthalene	50 mg/m <sup>3</sup>	52 mg/m <sup>3</sup>

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**APPEARANCE AND ODOR:** Dark amber liquid with moderate aromatic odor.

**SPECIFIC GRAVITY (Water = 1):** 1.06 g/ml

**BULK DENSITY:** 8.84 lbs/gal.

**SOLUBILITY:** Soluble

**VAPOR PRESSURE:** Not volatile

**BOILING POINT:** Not applicable

**pH:** 6 - 7 (1% dilution)

**PERCENT VOLATILE (by volume):** Not applicable

**EVAPORATION RATE:** Not established

Note: These physical data are typical values based on material tested but may vary from sample to sample.

Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**CONDITIONS TO AVOID:** Extreme temperatures. All sources of ignition. Prolonged exposure to heat. Electro-static discharge.

**INCOMPATIBILITY:** Oxidizing agents and strong alkalies.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of nitrogen, oxides of carbon, toxic vapors in a fire situation

**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

**Acute Oral LD<sub>50</sub> (rat):** 3956 mg/kg

**Acute Dermal LD<sub>50</sub> (rabbit):** >2000 mg/kg

**Eye Irritation (rabbit):** Mildly irritating

**Skin Irritation (rabbit):** Mildly irritating

**Inhalation LC<sub>50</sub> (rat):** >5.35 mg/L (4 hr).

**Skin Sensitization (guinea pig):** Not a sensitizer

**Carcinogenic Potential:** Not listed in OSHA. NTP lists Naphthalene as NTP-R. ACGIH lists Naphthalene as TLV-A4. IARC lists Naphthalene as IARC-2B.

**12. ECOLOGICAL INFORMATION**

This product is toxic to fish. **DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

**13. DISPOSAL CONSIDERATIONS**

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. 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 directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Do not reuse empty container.

**CONTAINER DISPOSAL: Non-refillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities. **Triple rinse containers small enough to shake (capacity < 5 gallons) 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 1/4 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. **Triple rinse containers too large to shake (capacity > 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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 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.** Refill this container with pesticide only. **DO NOT** reuse container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. **Triple rinse as follows:** 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. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. The container must only be refilled with a pesticide product. **DO NOT** reuse the container for any other purpose. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if the container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

**14. TRANSPORT INFORMATION**

**DOT Shipping Description:** 155 gallons and less: NOT REGULATED BY USDOT

**DOT Shipping Description:** 155 gallons and more: RQ UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (NAPHTHALENE), 9, III ERG GUIDE 171

**U.S. Surface Freight Classification:** COMPOUND, TREE OR WEED KILLING, NOI (NMF 50320, SUB 2: CLASS 60)

Consult appropriate ICAO/IATA and IMDG regulations for shipment requirements in the Air and Maritime shipping modes.

**15. REGULATORY INFORMATION**

**NFPA & HMIS Hazard Ratings:**

NFPA		HMIS	
1 Health	0 Least	1 Health	
1 Flammability	1 Slight	1 Flammability	
0 Instability	2 Moderate	0 Reactivity	
	3 High	J PPE	
	4 Severe		

**SARA Hazard Notification/Reporting**

<b>SARA Title III Hazard Category:</b>	Immediate	<u>Y</u>	Fire	<u>N</u>	Sudden Release of Pressure	<u>N</u>
	Delayed	<u>Y</u>	Reactive	<u>N</u>		

**Reportable Quantity (RQ) under U.S. CERCLA:** Naphthalene (CAS: 91-20-3) 100 lbs.

**SARA, Title III, Section 313:** Pendimethalin (CAS: 40487-42-1); Naphthalene (CAS: 91-20-3)

**RCRA Waste Code:** U165 (Naphthalene)

**CA Proposition 65: WARNING:** This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.

**CAUTION –** This chemical is a pesticide product registered by the United States 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 (SDS), and for workplace labels of non-pesticide chemicals.

**16. OTHER INFORMATION**

**MSDS STATUS:** Section 15 revised

**PREPARED BY:** Registrations and Regulatory Affairs

*®Harbinger is a registered trademark of Sills Ag Consulting, Inc.*

*®Viton is a registered trademark of DuPont Performance Elastomers*

**REVIEWED BY:** Environmental Health and Safety

**Disclaimer and Limitation of Liability:** This data sheet was developed from information on the constituent materials identified herein and does not relate to the use of such materials in combination with any other material or process. No warranty is expressed or implied with respect to the completeness or ongoing accuracy of the information contained in this data sheet, and LOVELAND PRODUCTS, INC. disclaims all liability for reliance on such information. This data sheet is not a guarantee of safety. Users are responsible for ensuring that they have all current information necessary to safely use the product described by this data sheet for their specific purpose.