

SAFETY DATA SHEET

SDS NUMBER: 241337-15-LPI

SDS REVISIONS: FORMAT

DATE OF ISSUE: 01/16/15

HARBINGER®
SUPERSEDES: 04/30/13

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

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 PRODUCT IDENTIFIER:

TRADE NAME: HARBINGER® HERBICIDE

1.2 RECOMMENDED USE: HERBICIDE FOR USE IN RICE

1.3 SUPPLIER DETAILS:

LOVELAND PRODUCTS, INC.

P.O. Box 1286 • Greeley, CO 80632-1286

1.4 24 Hour Emergency Phone: 1-800-424-9300 - Medical Emergencies: 1-866-944-8565 – Product Information: 1-888-574-2878 (LPI-CUST)
U.S. Coast Guard National Response Center: 1-800-424-8802

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to 29 CFR 1910.1200

Aspiration Hazard	Category 1	H304
Carcinogenicity	Category 2	H351
Aquatic Toxicity - Acute	Category 1	H400
Aquatic Toxicity – Long term	Category 1	H410

2.2 Label elements



Signal word: DANGER

Hazard Statement: H304 – May be fatal if swallowed and enters airways.
H351 – Suspected of causing cancer.
H400 – Very toxic to aquatic life.
H410 – Very toxic to aquatic life with long lasting effects.

Precautionary Statement:

P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P273 – Avoid release to the environment.

(Prevention):

P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
P202 – Do not handle until all safety precautions have been read and understood.
P272 – Contaminated work clothing should not be allowed out of the workplace.

Precautionary Statement:

P308+P311: IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P303+P352 – IF ON SKIN (or hair): Wash with plenty of soap and water.
P333+P311 – If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P391 – Collect spillage.
P362 – Take off contaminated clothing and wash before reuse.
P331 – Do NOT induce vomiting.

(Response):

Precautionary Statement:

(Storage):

P405 – Store locked up.

(Disposal):

P501 – Dispose of contents/container to hazardous or special waste collection point.

2.3 Other hazards

Hazards not otherwise classified

The following percentage of the mixture consists of component(s) with unknown hazards regarding the acute toxicity: 1% dermal.

The following percentage of the mixture consists of component(s) with unknown hazards regarding the acute toxicity: 1% oral.

The following percentage of the mixture consists of component(s) with unknown hazards regarding the acute toxicity: 1% inhalation - vapor.

The following percentage of the mixture consists of component(s) with unknown hazards regarding the acute toxicity: 1% inhalation - mist.

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Potential Health effects

Routes of exposure	Eye contact. Ingestion.
Eyes	Causes eye irritation.
Skin	Harmful if absorbed through skin.
Inhalation	No data available.
Ingestion	Harmful if swallowed.
Target organs	Eyes. Ingestion.
Signs and symptoms	Causes eye irritation.
Potential environmental effects	This product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have harmful or damaging effect on the environment.

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

3.2 Mixtures

Classification according to 29 CFR 1910.1200

Chemical Name:	CAS No.	Classification	Concentration [%]
Pendimethalin	40487-42-1	Asp.tox. 1; H304	37.4
Solvent Naphtha, Heavy Aromatic	64742-94-5	Carc. 2; H351	< 75.0
Naphthalene	91-20-3	Aquatic Acute. 1; H400	< 10.0
1-Methylnaphthalene	90-12-0	Aquatic Acute. 1; H410	< 6.0
2-Methylnaphthalene	91-57-6		< 12.0
Solvent Naphtha, Light Aromatic	64742-95-6		< 0.2

*Ingredients not specifically listed are non-hazardous or are to be considered proprietary or confidential business information per 29 CFR 1910.1200(i)

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice: Get medical attention if symptoms occur.

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 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 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 further treatment advice.

4.2 Most Important Symptoms and Effects, Acute and Delayed

Symptoms: Eyes: Causes eye irritation.
Oral: Harmful if swallowed.

4.3 Immediate Medical Attention and Special Treatment

Treatment: Treat symptomatically. Symptoms may be delayed.
FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565
Take container, label or product name with you when seeking medical attention.

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

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5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

Suitable Extinguishing Media: Use medium appropriate to surrounding fire. Dry chemical, carbon dioxide (CO₂), alcohol foam, foam, water spray or fog.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

Specific Hazards During Firefighting: Oxides of carbon, oxides of nitrogen, hydrocarbons and other unknown materials may be formed in a fire situation.

5.3 SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters: Self-contained breathing apparatus and full protective gear should be worn in fighting large fires involving chemicals. Use water spray to keep fire exposed containers cool. Keep people away. Isolate fire and deny unnecessary entry.

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Personal Precautions: Avoid inhalation of vapors and spray mist and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing.

6.2 ENVIRONMENTAL PRECAUTIONS

Environmental Precautions: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN-UP

Methods for Clean-Up: Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. After removal flush contaminated area thoroughly with water.
Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to Remove residual contamination.
Never return spills to original containers for re-use.

7. HANDLING AND STORAGE

7.1 PRECAUTIONS FOR SAFE HANDLING:

Advice on Safe 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.

7.2 CONDITIONS FOR SAFE STORAGE:

Requirements for Storage Areas and Containers: Do not store below temperature of 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.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS:

OCCUPATIONAL EXPOSURE LIMITS

U.S. Workplace Exposure Level (ACGIH) TLVs

Components	Type	Value
Naphthalene	TWA	10 ppm (skin)
1-Methylnaphthalene	TWA	0.5 ppm (skin)
2-Methylnaphthalene	TWA	0.5 ppm (skin)

U.S. Workplace Exposure Level (OSHA) PELs

Components	Type	Value
Naphthalene	TWA	10 ppm (skin)

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Specimen
No listings		

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8.2 EXPOSURE CONTROLS:

Engineering Measures

Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mists. Provide eyewash station and safety shower.

Individual Protection Measures:

Eye / Face Protection: Goggles or shielded safety glasses are recommended.

Skin Protection: Long-sleeved shirt and long pants. Chemical-resistant gloves, such as polyethylene or polyvinylchloride. Shoes plus socks.

Respiratory Protection: In case of inadequate ventilation or risk of inhalation of mists or vapors, use suitable respiratory equipment such as MSHA/NIOSH TC-23C with NIOSH equipped N, R, or P class filter media. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 APPEARANCE : Liquid
ODOR: Aromatic.
ODOR THRESHOLD: No data available.
COLOR: Dark amber.
pH: 6 - 7
MELTING POINT / FREEZING POINT: Freezing point: -19°C (-2.2°F) (based on the solvent).
BOILING POINT: ± 250°C (± 482°F) (based on the solvent).
FLASH POINT: 219.2°F (104°C).
FLAMMABILITY (solid, gas): No data available.
UPPER / LOWER FLAMMABILITY OR EXPLOSIVE LIMITS: Upper limit ± 5.6% - Lower limit ± 0.7%.
VAPOR PRESSURE: 0.05 hPa @ 20°C.
SOLUBILITY: Emulsifiable.
PARTITION CO-EFFICIENT, n-OCTANOL / WATER: No data available.
AUTO-IGNITION TEMPERATURE: ± 491°C (± 915.8°F).
DECOMPOSITION TEMPERATURE: No data available.
VISCOSITY: (kinematic): No data available
SPECIFIC GRAVITY (Water = 1): 1.07 g/ml
BULK DENSITY: 8.93 lbs./gal / 1.07 kg/L

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

10.1 REACTIVITY

Stable

10.2 CHEMICAL STABILITY

Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS

No data available. Will not polymerize.

10.4 CONDITIONS TO AVOID

Heat, sparks, open flame, prolonged storage, electro-static discharge, prolonged exposure to extreme heat, extreme temperatures.

10.5 INCOMPATIBLE MATERIALS

Nitric acid, sulfuric acid, oxidizing agents, strong alkalis.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of carbon, oxides of nitrogen, hydrocarbons and other unknown hazardous material may be formed in a fire situation.

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11 TOXICOLOGICAL INFORMATION

11.3 LIKELY ROUTES OF EXPOSURE

Ingestion. Inhalation. Eye contact. Skin contact.

LC₅₀ (rat): >5.35 mg/L (4 HR)**LD₅₀ Oral (rat):** 3,956 mg/kg**LD₅₀ Dermal (rat):** > 2,000 mg/kg**Acute Toxicity Estimates:** No data available**Skin Irritation (rabbit):** Slight irritant.**Eye Irritation (rabbit):** Moderate but temporary eye irritant.**Specific Target Organ Toxicity:** No data available.**Aspiration:** May damage lungs at swallowing (aspiration hazard)**Skin Sensitization (guinea pig):** Not a sensitizer**Carcinogenicity:** No data available.**Germ Cell Mutagenicity:** No data available**Interactive Effects:** None known

12 ECOLOGICAL INFORMATION

12.3 ECOTOXICITY

The product may be toxic to fish and aquatic invertebrates. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Information below is based on the technical ingredient Pendimethalin.

Ecotoxicological Data

	Species	Test Results
Pendimethalin	Rainbow trout	0.89 mg/L – 96-hour LC ₅₀
	Daphnia magna	0.4 mg/L – 96-hour EC ₅₀

Drift or runoff may adversely affect non-target plants.

Do not apply directly to water.

Do not contaminate water when disposing of equipment wash water.

Do not apply when weather conditions favor drift from target area.

12.2 PERSISTENCE AND DEGRADABILITY

Biodegradability: Not readily biodegradable.

12.3 BIOACCUMULATIVE POTENTIAL

Bioaccumulation: No data available.

12.4 MOBILITY IN SOIL

Will slowly evaporate from the water surface. Following exposure to soil, adsorption to solid soil particles is probable, therefore groundwater contamination is not expected.

12.5 OTHER ADVERSE EFFECTS

Assessment: No data available.

13 DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS

Wastes may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent), adding rinse water to spray tank. Offer container for recycling or dispose of in a sanitary landfill or by other procedures approved by appropriate authorities. Recycling decontaminated containers is the best option of container disposal. The Agricultural Container Recycling Council (ACRC) operates the national recycling program. To contact your state and local ACRC recycler visit the ACRC web page at <http://www.acrcycle.org/>. Do not contaminate water, food or feed by storage or disposal.

14 TRANSPORT INFORMATION

14.3 LAND TRANSPORT

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 (NMFC 50320, SUB 2: CLASS 60)

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15 REGULATORY INFORMATION**15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS****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**SARA Title III Hazard Category:**

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 pounds.

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

RCRA Waste Code: U165 (Naphthalene); D028 (Pendimethalin)

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

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

CAUTION

Causes moderate eye irritation.

Harmful if swallowed or absorbed through the skin.

Avoid contact with skin, eyes, or clothing.

16 OTHER INFORMATION

SDS STATUS: Format revised.

PREPARED BY: Registrations and Regulatory Affairs

REVIEWED BY: Environmental Health and Safety

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