



**CHRONIC:**

Inflammation of mucous membranes and respiratory tract may occur upon prolonged breathing of mist. Ingestion of large amounts of d'limonene has caused kidney and liver damage in male rats but not in female rats or mice of both species. Penair HD-1 does NOT contain any component listed as a carcinogen by IARC, NTP or OSHA.

**FIRST AID MEASURES:**

**EYE CONTACT:**

Flush eyes with large amounts of water. See physician immediately.

**SKIN CONTACT:**

Flush skin with large amounts of water. Remove contaminated clothing and launder before reuse. If skin irritation develops or persists, consult physician.

**INHALATION:**

Remove person to fresh air. Administer oxygen or artificial respiration as needed. Call a physician immediately.

**INGESTION:**

If swallowed, give plenty of milk or water. DO NOT INDUCE VOMITING. Use a stomach pump. Call a physician immediately.

**WORKPLACE EXPOSURE CONTROLS:**

**PERSONAL PROTECTION:**

Safety glasses are recommended for all workplace conditions. Solvent resistant gloves should be used. Depending on how the product is used, other protective gear, including splash proof goggles or face shield, rubber boots, apron, gauntlets, or rain gear should be worn.

**VENTILATION:**

None needed under normal use conditions. Adequate ventilation must be provided in confined areas. For enclosed work spaces, or where large amounts of the product are being used, the use of fans or other mechanical ventilation is recommended. If ventilation is inadequate, an organic vapor mask should be used. Avoid breathing of vapors and spray mist. Use coarse spray only. DO NOT FOG THIS PRODUCT.

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**SECTION 4 FIRE & EXPLOSION HAZARDS**

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**FLASH POINT:** 125°F PMCC, 155°F COC

**FLAMMABLE LIMITS:** not determined

**AUTOIGNITION TEMPERATURE:** not determined

**GENERAL HAZARD:**

COMBUSTIBLE LIQUID. Can form flammable mixtures at or above the flash point. Containers can rupture and explode under fire conditions due to pressure and vapor buildup.

**FIRE FIGHTING:**

Either allow fire to burn out under controlled conditions or extinguish with water, foam, or dry chemical. Cool exposed containers with water spray.

**HAZARDOUS COMBUSTION PRODUCTS:**

Smoke, fumes, and oxides of carbon.

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**SECTION 5 SPILL CONTROL MEASURES**

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**LAND SPILL:**

Eliminate sources of ignition. For small spills, use absorbent material such as towels or absorbent powders. Put all material into proper waste disposal container with lid tightly covered. For larger spills, contain spill, recover free liquid, and use absorbent material to dry area. Put all material into appropriate waste containers.

**WATER SPILL:**

Remove product from water surface by skimming or with suitable absorbents. This product contains surfactants which will cause it to disperse in water. Localized high concentrations of this product may cause fish kills, but no persistent or long term effects will result. Check with local environmental regulatory agencies for reporting requirements.

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**SECTION 6 HANDLING & STORAGE**

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**STORAGE TEMPERATURE, °F:** ambient. Do not store at temperatures consistently above 120° F, or below 32° F, to ensure product integrity. If product freezes, thaw and mix before using.

**GENERAL:** Keep away from artificial heat sources, open flames, and other ignition sources. Do not store near strong oxidants.

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**SECTION 7 TYPICAL PHYSICAL & CHEMICAL PROPERTIES**

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**BOILING POINT, °F:**

About 212 (100°C)

**EVAPORATION RATE, Acetone = 1:**

equal to water

**SOLUBILITY IN WATER:**

emulsifies

**SPECIFIC GRAVITY at 75°F:**

0.95

**ODOR AND APPEARANCE:**

clear amber liquid with citrus odor

**VAPOR PRESSURE, mm Hg at 20°C:**

equal to water

**VAPOR DENSITY (Air = 1):**

equal to water

**WT% ORGANIC VOLATILES:**

about 50

**pH:**

9.0

**DECOMPOSITION TEMPERATURE:**

400° F (204°C)

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**SECTION 8 REACTIVITY DATA**

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**GENERAL:**

This product is stable and hazardous polymerization will not occur.

**INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:**

Strong oxidizing agents.

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**SECTION 9 REGULATORY INFORMATION**

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**DEPARTMENT OF TRANSPORTATION (DOT):****PROPER SHIPPING NAME:**

FLAMMABLE LIQUID, N.O.S. (contains d'limonene)

**HAZARD CLASS: 3**

**IDENTIFICATION NUMBER:** UN1993

**PACKING GROUP:** III

**LABEL:** FLAMMABLE

**INTERNATIONAL REGULATIONS:\*****PROPER SHIPPING NAME:**

FLAMMABLE LIQUID, N.O.S. (contains d'limonene)

**HAZARD CLASS: 3**

**IDENTIFICATION NUMBER:** UN1993

**PACKING GROUP:** III

**LABELS:** FLAMMABLE, MARINE POLLUTANT

\*NOTE: International regulations must be used for all air and sea-going vessel shipments

**FLASH POINT:** 125°F TCC

**pH:** 9.0

**TSCA:** The ingredients in this product are listed on the TSCA inventory.

**CERCLA:**

This product does not contain any CERCLA reportable materials. Check with local and state authorities to determine if other reporting requirements are applicable.

**RCRA HAZARD CLASS:**

D001 Ignitable hazardous waste

**SARA TITLE III:**

**311/312 HAZARD CATEGORIES:**

Acute health, Chronic health, Fire

**313 REPORTABLE INGREDIENTS:**

Diethylene glycol monobutyl ether CAS# 112-34-5 10 - 15%

**NEW JERSEY RIGHT-TO-KNOW INFORMATION:**

This product contains water (CAS# 7732-18-5), d'limonene (CAS# 5989-27-5), potassium fatty acid soap (CAS# 61790-44-1), diethylene glycol monobutyl ether (CAS# 112-34-5), and nonylphenol ethoxylate (CAS# 9016-45-9).

**CALIFORNIA PROPOSITION 65 INFORMATION:**

This product does not contain any chemicals recognized by the state of California to cause cancer and/or birth defects or reproductive harm.

**SCAQMD INFORMATION:**

Is there a photochemically reactive material present? Yes  
 What is the % by volume of photochemically reactive material? about 30  
 What is the VOC content? 490 g/l  
 What is the vapor pressure of VOC's? 0.18 mm Hg @ 20°C

**SECTION 10 NOTES**

**HAZARD RATING SYSTEMS:**

	HMIS	NFPA	KEY
HEALTH	1	1	4 = Severe
FLAMMABILITY	2	2	3 = Serious
REACTIVITY	0	0	2 = Moderate
			1 = Slight
			0 = Minimal

**REVISION SUMMARY:**

Change in Section 9

**SUPERSEDES ISSUE DATE:**

February 10, 2004

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR SALES ENGINEER  
 FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 201-567-3000

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