



# SAFETY DATA SHEET

Penetone® Corporation, 700 Gotham Parkway, Carlstadt, NJ 07072  
CAGE 56883

**PENAIR® HD 4**  
MIL-PRF-87937D TYPE IV

Page: 1 of 7  
Date Prepared: January 25, 2015  
MSDS No.: 2329

## SECTION 1: IDENTIFICATION

**Product name:** PENAIR HD 4

**Recommended use:** Aircraft exterior cleaner

**Physical Description:** Clear water white to pale yellow/amber liquid with mild odor

**Generic Ingredients:** Water, surfactants, and glycol ether

**Manufacturer:**

Penetone Corporation  
700 Gotham Parkway  
Carlstadt, NJ 07072  
800-631-1652 or 201-567-3000

**Business Contact:**

Customer Service  
800-631-1652 x2602 or 2272  
Product Safety  
800-631-1652 x2211 or 2257

**Emergency Phone Numbers:** PENETONE 201-567-3000 CHEMTREC 800-424-9300

## SECTION 2: HAZARDS IDENTIFICATION

**GHS CLASSIFICATION:**

<b>Health:</b> Skin irritation: 2 Eye irritation: 2A	<b>Carcinogenicity:</b> 2 <b>Physical:</b> not classified
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**WARNING!**

Causes Skin Irritation.  
Causes Serious Eye Irritation.  
Suspected of Causing Cancer.



<b>Precautionary Statements:</b>	
<p><u>Prevention:</u> Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, clothing, eye protection, and face protection. Wash hands and exposed skin thoroughly after handling.</p> <p><u>Response:</u> <i>If exposed or concerned:</i> Get medical advice/attention. <i>If on skin:</i> Wash with plenty of water. If skin irritation</p>	<p>occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. <i>If in eyes:</i> Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.</p> <p><u>Storage:</u> Store locked up.</p> <p><u>Disposal:</u> Dispose of contents/container in accordance with local, regional, and national regulations (see Sections 13 and 15 of SDS for disposal and reporting requirements).</p>

## SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Concentration Wt% (1)
Water	7732-18-5	50-75
Linear alcohol ethoxylate	68439-46-3	15-25
Dipropylene glycol monomethyl ether	34590-94-8	5-15
Coco diethanolamide	68603-42-9	1-10

(1) Exact percentages being withheld under trade secret provision of OSHA HCS 1910.1200(i)



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### SECTION 4: FIRST-AID MEASURES

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#### General Description of Symptoms & First-Aid Measures

Most likely work-place exposure routes will be *skin contact* or *inhalation*.

For *skin contact*, typically no immediate effects will be observed. A slight tingling sensation might be felt some time after exposure. Slight reddening or minor irritation could also develop if product is not quickly washed off.

*Inhalation* exposure may produce varied effects. Typical symptoms could include coughing, sneezing, and a tingling sensation in the nose, throat, and lungs.

#### Eyes

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists or develops: Get medical advice or attention. Penetone recommends that after any eye exposure a physician be seen immediately.

#### Ingestion

If swallowed: Rinse mouth. Call a poison center, doctor, physician or other competent medical authority if you feel unwell.

#### Inhalation

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center, doctor, physician or other competent medical authority if you feel unwell.

#### Skin

If on skin: Wash with plenty of water or a mild soap. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice or attention.

#### Special Treatment / Other

None

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### SECTION 5: FIRE FIGHTING MEASURES

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#### Flammable Properties

**Classification:** Non-flammable

**Flash Point:** None-to-boil

**Autoignition Temperature:** Not determined

**Lower Flammable Limit:** Not applicable **Upper Flammable Limit:** Not applicable

#### Specific Hazards

Product is water based and presents no unusual fire hazards.

#### Extinguishing Media

Use extinguishing agents appropriate for controlling surrounding fire.

**Unsuitable:** None.

#### Protection & Precautions for Firefighters

**Protective Equipment & Clothing:** Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

**Fire Fighting Guidance:** Cool containers with flooding quantities of water until well after fire is out. Move containers from fire area if you can do it safely. Dike fire control water for later disposal; do not scatter material. Containers can expand and explode under fire conditions due to vapor buildup. Always stay away from containers engulfed in fire.



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**Hazardous Combustion Products:** Smoke, fumes, and oxides of carbon and nitrogen when taken to dryness.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Land Spill

Stop leak if you can do it safely. For large spills, dike and pump into properly labeled containers for reclamation or disposal. For small spill, soak up with absorbent material and place in properly labeled containers for disposal.

### Water Spill

This is a water based product and will completely mix/dissolve in water making recovery difficult. Check with local environmental regulatory agencies for reporting requirements.

See SECTION 8 for EXPOSURE CONTROLS and PERSONAL PROTECTION.

## SECTION 7: HANDLING & STORAGE

### Handling

Avoid contact with eyes, skin and clothing. After handling, always wash hands thoroughly with soap and water. Avoid personal contact with any residue. Do not cut, weld, or reuse empty container.

### Storage

Keep container tightly closed when not in use. Do not store near strong acids or bases. Do not store in direct sunlight. Avoid storing above 120°F (49°C).

## SECTION 8: EXPOSURE CONTROLS and PERSONAL PROTECTION

### Engineering Controls

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

### Personal Protection

**Inhalation** A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. Use of a general purpose particulate mask or respirator with particulate filter is recommended.

**Skin** Wear chemical resistant gloves such as: rubber, nitrile, neoprene, or latex when skin contact is possible. Protective clothing including gloves, apron, sleeves, boots, head and face protection should be worn depending on how the product is used. PPE should be cleaned thoroughly after each use.

**Eyes** Penetone recommends always wearing safety glasses as a minimum in any workplace. Conditions may warrant the use of chemical goggles and possibly a face shield. Consult your standard operating procedure or safety professional for advice. Use protective eye and face devices that comply with ANSI Z87.1-1987.

### Additional Remarks

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.

### Occupational Exposure Limits

Component Name	Source	Value	Type	Notation
Dipropylene glycol methyl ether	ACGIH	100 ppm	TWA	Skin
		150 ppm	STEL	Skin
	NIOSH	100 ppm	TWA	Skin
		150 ppm	STEL	Skin



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OSHA Z1      100 ppm      TWA      Skin

### SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

**Appearance:** clear water white to light yellow/amber liquid

**Odor:** mild

**Odor Threshold:** not determined

**pH:** about 8.5

**Melting Point / Freezing:** about 32°F

**Boiling Point / Boiling Point Range:** about 212°F

**Flash Point:** none to boil

**Evaporation Rate:** equal to water

**Flammability:** not applicable

**Lower Flammable Limit:** not applicable

**Upper Flammable Limit:** not applicable

**Explosive Properties:** not applicable

**Vapor Pressure:** equal to water

**Relative Vapor Density:** equal to water

**Relative Density:** 1.01

**Solubility (Water):** water soluble

**Partition Coefficient ( $K_{ow}$ ):** not determined

**Auto-ignition temperature:** not determined

**Decomposition temperature:** not determined

**Viscosity:** 10-30 centipoise

### SECTION 10: STABILITY & REACTIVITY

#### Reactivity

Product is not reactive, but if strong acids or bases are added, heat will be generated which could cause splattering.

#### Chemical Stability

Stable.

#### Hazardous Reactions

None.

#### Conditions to Avoid

Do not store near strong acids or bases.

#### Incompatible Materials

Strong acids or bases.

#### Hazardous Decomposition Products

Oxides of carbon and nitrogen when taken to dryness.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Product Summary

Based upon ingredient data, product is non-toxic by oral and dermal routes exposure. Based upon ingredient



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information, product is expected to cause skin irritation and to cause serious eye irritation.

### Acute Toxicity:

**Dermal:** >7,000 mg/kg rabbit (estimated from additivity formula)

**Inhalation:** no data available

**Oral:** >5,000 mg/kg rat (estimated from additivity formula)

### Skin Corrosion/Irritation

Causes skin irritation. Based upon component data.

### Serious Eye Damage/Irritation

Causes serious eye irritation. Based upon component data.

### Sensitization - Respiratory or Skin

Not expected to be a skin or respiratory sensitizer. Based upon component data.

### Germ Cell Mutagenicity

Not expected to be mutagenic based upon partial component information and comparison to structurally similar compounds.

### Carcinogenicity

Coco diethanolamide is listed by IARC as Group 2B: Possibly carcinogenic to humans.

### Developmental/Reproductive Toxicity

No data available. Not expected to be a developmental or reproductive toxin based upon partial component information and comparison to structurally similar compounds.

### Specific Target Organ Effects - Single Exposure

No data available.

### Specific Target Organ Effects - Repeated or Prolonged Exposure

No data available.

For the linear alcohol ethoxylate surfactant used in this product, repeat dose 90 day oral sub-chronic NOAEL in male/female rats was >500 mg/kg/d and >400 mg/kg/d, while a 90 day dermal sub-chronic NOAEL was >125 mg/kg/d for male/female rats.

### Aspiration Hazard

Based upon components, product not expected to be aspiration hazard.

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## SECTION 12: ECOLOGICAL INFORMATION

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### Product Summary

Product is expected to be harmful fish, aquatic invertebrates, algae, and microorganisms. (Acute aquatic toxicity category 3 by European Union classification). Product is readily biodegradable.

### Ecotoxicity

LC/EC/IC 10-100 mg/l (estimated using additivity formula).

In three separate range finding studies, 24 hr, 48 hr and 96 hr LC50s for fathead minnows and 24 hr and 48 hr LC50s for ceriodaphnia dubia were found to be 10-50 ppm.

### Persistence and Degradability

Product components considered readily biodegradable.

In three separate 28 days studies (all by EPA 796.3100), degradability was determined to be: (1) 87.7% by DOC; (2) 89.3% DOC, 39.8% CO<sub>2</sub>; (3) 90.0% by DOC, 40.3% by CO<sub>2</sub> evolution. Minimum inhibitory concentrations were reported to be less than 3.125% in all studies. Product as a whole should be considered readily biodegradable.



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**Bioaccumulative Potential**  
Product not considered bioaccumulative

**Mobility in soil**  
No soil mobility data available.

**Other Adverse Effects**  
None known.

## SECTION 13: DISPOSAL CONSIDERATIONS

Product is a nonhazardous waste under RCRA definitions. Dispose of contents/container in accordance with all applicable federal, state, and local regulations.

**Note:** Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes. Appropriate hazardous waste designation is the responsibility of the user.

## SECTION 14: TRANSPORT INFORMATION

**ID No.:** Not applicable, nonhazardous material  
**Proper Shipping Name:** Not applicable  
**Hazard Class:** Not applicable  
**Packing Group:** Not applicable  
**Label:** None  
**Marine Pollutant:** Not applicable  
**RQ:** None  
**Special Precautions:** None

## SECTION 15: REGULATORY INFORMATION

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

**RCRA HAZARD CLASS**  
Nonhazardous waste

**SARA 311/312 REPORTABLE HAZARD CATEGORIES:** Immediate (Acute) Health

**REPORTING REQUIREMENTS** (all quantities in pounds)

Component	CAS / 313 Code	Section 302 (EHS) TPQ	Section 304 EHS RQ	CERCLA RQ	Section 313	CAA 112(r) TQ	CWA / OPA
no component is subject to reporting requirements							

### NEW JERSEY RIGHT-TO-KNOW INFORMATION

This product contains water (CAS# 7732-18-5), alcohol ethoxylate (CAS# 68439-46-3), dipropylene glycol methyl ether (CAS#34590-94-8) and coconut diethanolamide (CAS# 68603-42-9).

### CALIFORNIA PROPOSITION 65 INFORMATION

This product contains a chemical recognized by the state of California to cause cancer: coco diethanolamide (CAS# 68603-42-9).



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## SCAQMD INFORMATION

Is there a photochemically reactive material present? No  
What is the % by volume of photochemically reactive material? 0  
What is the VOC content? 100 mg/l  
What is the vapor pressure of VOC's? Less than 0.1 mm Hg @ 20°C

## SECTION 16: OTHER INFORMATION

### REVISION SUMMARY

New GHS format

### SUPERSEDES ISSUE DATE

May 13, 2011

### HAZARD RATING SYSTEMS:

	<u>HMIS</u>	<u>NFPA</u>
HEALTH	1	1
FLAMMABILITY	0	0
REACTIVITY	0	0
	B	

KEY  
4 = Severe  
3 = Serious  
2 = Moderate  
1 = Slight  
0 = Minimal

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

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