

# PENAIR® HD-1

## Aircraft/Aerospace Equipment Cleaner

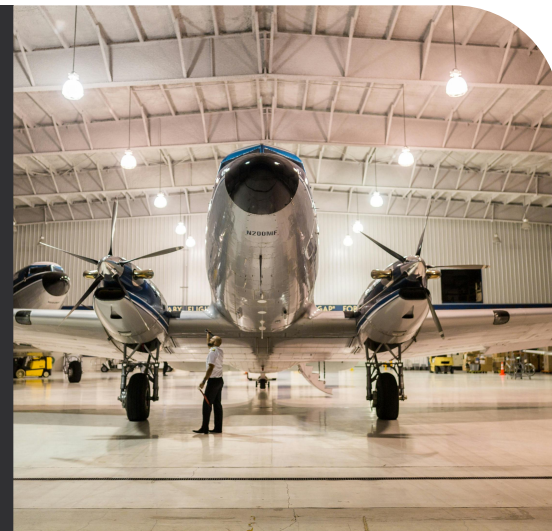
- **Penair HD-1** is a unique, biodegradable blend of natural hydrocarbon solvent, corrosion inhibitors and surfactants with added carbon removers. It is effective on the toughest aircraft soils, including exhaust carbon, hydraulic oils, boot prints, solid film lube and wet stacking.
- **Penair HD-1** replaces cleaners that contain toxic or environmentally harmful ingredients, and reduces volatile organic vapor emissions compared to other solvent cleaners.
- A concentrated cleaner, **Penair HD-1** is formulated to be economical to use when diluted with water.
- Replacing hazardous petroleum and chlorinated solvents with **Penair HD-1** will assist aircraft maintenance personnel in complying with today's stringent EPA and OSHA standards.

### Use procedure

Apply **Penair HD-1** with non-atomizing coarse pressure spray, foam equipment, or bucket and brush. Allow 3-8 minutes dwell time, depending on the soils to be removed. Agitate and rinse with water.

### Dip tank operations

Dilute **Penair HD-1** with a minimum of two parts water unless otherwise specified by technical order. Dilute with two parts water for heavier soils. For lighter soils, 10 parts water may be used.



### Concentration

- Light soils: 1:4 to 1:20
- Moderate soils: 1:2 to 1:4
- Heavy soils: 1:1 to 1:2

## Features and Benefits

- Biodegradable
- Non-toxic
- Near neutral pH
- No petroleum or chlorinated solvents
- Heavy-duty cleaner
- Reduces man-hour requirements
- Reduces cleaning costs
- Improves worker safety
- Improves aircraft appearance
- Non-corrosive to aerospace metals

## Available Sizes

- 55 gallon drum
- 5 gallon pail

## Approvals

- MIL-PRF-87937D Type 1

## Physical Properties

Appearance	Clear amber liquid
Odor	Mild citrus
pH	About 9
Freezing Point	About 30°F
Boiling Point	About 212°F
Flash Point (TCC)	125°F, 155°F COC
Relative Density	0.97
Auto-Ignition Temperature	Not determined
Water Solubility	Emulsifies
Viscosity	5-25 CP at room temperature

## Incompatibility

Strong oxidizing agents.

## Warehousing Precautions

Store in a well ventilated place. Keep cool. Keep container tightly closed when not in use. Store locked up. Do not store near heat, sparks, open flame or other ignition sources. Do not store in direct sunlight. Avoid storing above 120°F (49°C).

## Personal Protection/Security Equipment



## WHMIS



## First Aid Measures

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

**If swallowed:** Immediately call a poison center, doctor, physician or other competent medical authority. Rinse mouth. Product presents an aspiration hazard. DO NOT INDUCE VOMITING.

**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.

**If on skin (or hair):** Take off immediately all contaminated clothing. Rinse skin with water or shower. A mild soap may be used to wash skin. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice or attention.

**IMPORTANT:** Before using PENAIR® HD-1, always be sure to read and follow precautions and directions for use appearing on the product container label and the safety data sheet (S.D.S.)