

PENAIR® HD-4

Aircraft/Aerospace Equipment Cleaner

- **Penair HD-4** is a biodegradable aircraft cleaner specifically designed for use on all types of aerospace equipment, including aircraft exteriors and aerospace ground equipment (AGE). It is a mild liquid alkaline cleaning containing corrosion inhibitors and heavy duty surfactants that make it highly effective on the toughest of aircraft soils, including exhaust carbon, hydraulic oils, boot prints, and solid film lube. This product replaces cleaners that contain toxic or environmentally harmful ingredients thereby allowing aircraft maintenance personnel to comply with stringent EPA and OSHA standards.
- **Penair HD-4** has no flash or fire point and eliminates any storing or handling problems. Additionally, it contains low levels of VOC's, lessening problems with regards to air quality in non-attainment areas.



External Cleaning Methods

Aircraft: Dilute the concentrate 1:10 to 1:20 with water depending on the amount of soil to be removed. For spot cleaning, dilute the concentrate with 4 to 10 parts water. After cleaning, rinse off with water. Ensure engines are properly blocked and sealed to preclude contact with internal jet components. Not recommended for cleaning canopies.

Aerospace Ground Equipment (AGE): Dilute the concentrate 1:10 to 1:20 with water depending on the amount of soil to be removed. For spot cleaning, dilute the concentrate with 4 to 10 parts water depending on the amount of soil to be removed. After cleaning, rinse off with water.

Motor Vehicle Engines: Dilute the concentrate with 3 to 10 parts water depending on the amount of soil to be removed. After cleaning, rinse off with water. Not recommended as a spot cleaner for engines.

Features and Benefits

- Biodegradable
- Heavy-duty cleaner
- Improves worker safety
- Non-corrosive to aerospace metals
- Non-toxic
- Low VOC's
- Improves aircraft appearance
- No petroleum or chlorinated solvents
- Reduces cleaning costs
- Reduces hazardous waste

Available Sizes

- 6 gallon pail
- 55 gallon drum

Approvals

- MIL-PRF-87937D TYPE IV

Chemisphere
2101 Clifton Ave,
St. Louis, MO 63139

chemispherecorp.com

Integrity Partners Group
1111 Industry Ave SE,
Roanoke, VA 24013

integritypartnersgrp.com

Chemsolv
1111 Industry Ave SE,
Roanoke, VA 24013

chemsolv.com

Eden Custom Processing
328 Summit Rd.
Eden, NC 27288

ecpchem.com

Physical Properties

Appearance	Clear to light yellow/ amber liquid
Odor	Mild
pH	About 8.5
Freezing Point	About 32°F
Boiling Point	About 212°F
Flash Point (TCC)	None to boil
Relative Density	1.01
Auto-Ignition Temperature	Not determined
Water Solubility	Complete
Viscosity	10-30 CP at room temperature

Incompatibility

Strong acids or bases

Warehousing Precautions

Keep container tightly closed when not in use. 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. 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.

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): Wash with plenty of water or mild soap. Take off immediately all contaminated clothing and wash before reuse. If skin irritation or rash occurs: Get medical advice or attention.

IMPORTANT: Before using PENAIR HD-4, 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.)