



# BioDefense 24/7™

Aviation Nano-Sealer – Reduce Drag, Reduce Maintenance, High Altitude & Temperature



## Product Info

**BioDefense 24/7™** will reduce drag, reduce maintenance costs, reduce ice & snow build-up, and extend the life of your surfaces for an immediate appearance enhancement and long-term return on investment. Is designed with additional rust and corrosion resistance components for use on metals and all surfaces in the most extreme atmospheres, such as high altitude, high temperature, caustic or acidic conditions, and saltwater spray.

**DevMar®** has successfully combined two emerging technologies to address multiple problems of surface protection against corrosion, soil adhesion, atmospheric fouling, abrasion, static, and UV degradation with “liquid nano-metal” penetrating sealing. Employing a proprietary water-based fusion of nanotechnology-sized polymeric particulates, **BioDefense 24/7™** protectant works on all hard and soft surfaces to seal, protect, enhance the appearance, and extend asset life. **BioDefense 24/7™** also utilizes nano-metal oxides to densify and strengthen surfaces without hardening to further enhance UV protection and surface protection.

Cover photo is a **Bombardier Leer 60** finished with **BioDefense 24/7™**.



## Testimonials

(BioDefense 24/7) applied to Cessna Barron Aircraft, Citation 5, and Challenger... The cleaning process is 75% easier once the plane returns to base.

Millionaire FBO, Topeka, KS

The exhaust on the underside comes right off by hand, whereas before, you couldn't scrape it off with towels and remover. Boot marks on the wings from entry, do not show up either.

Cessna C-400 Coast Guard Aux. pilot, MA

## Benefits

- Reduce Drag
  - The test article had a 6.5% to 14.6% reduction in drag, which is extremely large considering previous work that has illustrated the difficulty in reducing friction drag on aerodynamic shapes.
  - Cessna Barron, Citation 5, and Bombardier Challenger flights from Kansas to California and back show fuel savings of 1% to 2%.
- Cessna C-400 in Massachusetts showed a 3% – 5% increase in speed.
- **BioDefense 24/7™ adds no weight or dimension to the surface**, unlike waxes and polishes.
- **BioDefense 24/7™ stays flexible and does not impede the function of de-icing fluid weep holes.**
- Safe on metal, rubber, fabric, glass, and composites.
- Interior Surfaces
  - Seals surfaces to protect from soil adhesion staining, UV degradation, adhesion of atmospheric pollutants, and wear.
  - Seals to maintain microscopic pollutants below ISSA safe levels and reduces daily routine maintenance costs.

**Appearance:** White liquid  
**Fragrance:** Sweet Lemon  
**pH:** 7.0-8.0  
**Flash Point:** Same as Water  
**Storage:** Between 40° F and 110° F  
**Compliance:** Zero VOC's  
Non-pollutant for air, water, soil

## Features

- Water-based
- Non-flammable
- Non-toxic
- Non-abrasive
- Does not affect pH
- Does not etch surfaces
- Does not add weight or dimension
- Does not contain silicones, PTFE's, oils, waxes
- NO VOC's
- Viable to 662° F or 350° C
- Does not harden
- Enhances shine and matte finishes
- 100% soluble in water
- Ozone safe

## Confirmed Testing

### Passes or exceeds the industry standard for:

Boeing D6-17487: (Exterior and General Cleaners and Liquid Waxes, Polishes, and Polishing Compounds)  
Boeing D6-7127: (Cleaning Interiors of Commercial Transport Aircraft)  
Douglas CSD #1: (Materials and Procedures for Polishing Aluminum Surfaces)  
Aerospace Materials Specification (AMS) 1650C: (Polish, Aircraft Metal Type 1: Liquid)  
ASTM B117: (salt spray corrosion 500+ hours)  
ASTM F1110: (aviation sandwich corrosion)  
ASTM F483: (aviation immersion corrosion)  
ASTM F519-93: (hydrogen embrittlement)  
ATM F519, Type 1c: (hydrogen embrittlement)  
ASTM F485: (no stain/residue test)  
ASTM F502: (acrylic crazing)  
ASTM F484: (stress crazing on acrylic to 4,500 psi)  
ASTM D56: (flash point 140 deg. limit) Passes

## Use Instructions

Always refer to SDS and product label prior to use. Do not use and/or combine with other chemicals. **BioDefense 24/7™** is ready-to-use and does not need to be diluted.

### Thoroughly clean surfaces prior to application:

- Apply sealer to dry surface with fine-mist sprayer and gently spread with a soft cloth
- Allow to dry for 5-10 minutes
- Buff with a soft cloth

## Tips

- One-gallon seals up to 3,000 sf ft of hard surface & 1,500 sq ft of soft surface
- For large applications, spray with a backpack sprayer or another fine mist applicator. An electrostatic sprayer may be used.
- For the first application, two coats is recommended

## Warning

As with all cleaning and sealing products use protective wear (gloves and goggles to avoid skin and eye contact).