

## Duncan Aviation & ForzaBOND® 81-0389

### A Long-Standing Adhesive Partnership Built on Performance and Trust

For more than two decades, **Duncan Aviation** and **Forza** have partnered to ensure the highest standards of cabin interior refurbishment in the aviation industry. When Duncan Aviation—the largest family-owned business jet service provider in the world—sought a dependable, high-performance adhesive capable of maintaining aesthetic quality while meeting stringent FAA safety requirements, Forza stepped up with **ForzaBOND 81-0389**.

This neoprene-based contact adhesive has since become a trusted standard in Duncan Aviation's interior operations, offering reliable adhesion, flexibility, and temperature resistance for a wide range of aircraft interior applications.

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### The Challenge

Aircraft interior components must withstand a demanding environment. Cabin walls, cabinets, seating assemblies, and trim panels face constant cycles of vibration, temperature fluctuation, and low-pressure conditions. Traditional adhesives often pose tradeoffs: either they are too soft and gum up knives and cutting tools, or they cure too stiff, leaving a visible or palpable hard bond line beneath veneers and upholstery.

Furthermore, all interior materials must comply with **FAA flammability standards 14 CFR 25.853 (a) and (c)**—a requirement that rules out many lower-cost or consumer-grade adhesives. Duncan Aviation's team needed a single, versatile adhesive that could handle **foam laminations, leather and fabric bonding, cabinetry, and paneling**—all while offering clean workability and consistent performance across these substrates.

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### The Solution: ForzaBOND 81-0389

ForzaBOND 81-0389 is a **high-performance neoprene contact adhesive** formulated for industrial and aviation use. It was engineered to provide rapid initial tack, strong ultimate bond strength, and clean application via both brushing and spraying methods.

The adhesive can be applied with standard industrial spray systems such as **DeVilbiss JGA** or **Binks 2001** guns, delivering uniform coverage with minimal overspray. Its fast-drying nature allows technicians to position and bond lightweight materials efficiently—achieving up to **80% of its final strength immediately** and full cure within 24 hours.

ForzaBOND 81-0389's clear or neutral appearance also makes it ideal for applications where visibility of the glue line is a concern, such as **upholstered seating or fine veneer finishes**.

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### **Proven Performance in Aviation Interiors**

Over 20 years of use within Duncan Aviation's interior overhaul division have validated ForzaBOND 81-0389's reliability. The adhesive not only meets aviation fire safety standards but also maintains excellent performance across a variety of substrates without sacrificing flexibility or workability.

Key outcomes Duncan Aviation experienced include:

- **Multi-Use Efficiency:** One product suitable for foam build-ups, fabric, leather, veneer, and panel applications—reducing material inventory complexity.
- **Enhanced Workability:** The adhesive remains smooth and spreadable without gumming saw blades or cutting tools, improving shop efficiency.
- **Clean Appearance:** The glue line stays flexible and soft, eliminating visible hard edges and ensuring a professional finish.
- **Regulatory Compliance:** Easily passed FAA flammability and fire-block tests per 14 CFR 25.853 standards.
- **Durability in Harsh Conditions:** Excellent temperature resistance helps protect bond integrity during periods of aircraft ground exposure and thermal cycling.

These qualities have made ForzaBOND 81-0389 the adhesive of choice for Duncan Aviation's wide range of cabin refurbishment projects—from corporate jet seating to VIP cabinet laminations.

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## Technical Advantages of ForzaBOND 81-0389

Drawing on its laboratory-tested formulation, ForzaBOND 81-0389 offers a combination of **high green strength, rapid bonding,** and **thermal durability** uncommon in general-purpose adhesives.

### Core Technical Properties:

Property	Specification
Adhesive Type	Neoprene-based contact adhesive
Appearance	Clear/Neutral or Red
Solids	15–21%
Viscosity	100–150 cps
Open Time	15–20 minutes
VOC	343 g/L
Temperature Resistance	Maintains adhesion strength under high heat conditions
Coverage	2+ grams dry adhesive per sq. ft. application recommended

The adhesive's open time provides ample working flexibility for technicians, while its fast-tack profile supports assembly line efficiency. As a **flammable solvent-based contact adhesive**, proper ventilation and handling procedures ensure safe application in MRO and OEM environments.

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## Broad Material Compatibility

ForzaBOND 81-0389 bonds a wide range of aviation and industrial materials, including:

- Leather, fabric, foam, and upholstery
- Veneer and wood
- Rubber, plastic laminate, and melamine
- Metals, fiberglass, and select plastics

This broad compatibility makes it a universal bonding solution for **aircraft cabin interiors, furniture, and panels**, removing the need for multiple specialized formulas in a single shop.

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## Enduring Partnership and Application Longevity

More than a decade after its introduction, ForzaBOND 81-0389 continues to serve as a **technical benchmark** within Duncan Aviation's adhesive inventory. The adhesive's adaptability and stable performance have proven cost-effective and dependable, helping technicians deliver consistent results across hundreds of aircraft refurbishments annually.

This partnership underscores how precision-engineered adhesives—applied with disciplined process control—can create tangible advantages in production reliability, weight management, and finish quality.

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**ForzaBOND 81-0389** exemplifies the balance between science and craftsmanship—a proven solution trusted by leading aviation professionals to meet both performance and regulatory demands.

For more information, contact [info@forzabuilt.com](mailto:info@forzabuilt.com) or visit [www.forzabuilt.com](http://www.forzabuilt.com).

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