



Case Study

Custom Woven Seating Material for High-Performance Commercial Furniture Applications



Summary: Acme Mills partnered with a U.S.-based commercial furniture manufacturer specializing in customizable seating solutions for healthcare, education, and public spaces. The collaboration aimed to provide an extra-stiff woven Dymetrol fabric tailored for use in high-traffic seating systems, ensuring long-lasting performance, durability, and support. The project required precise material customization, adherence to rigorous quality standards, and seamless delivery according to the client's

production schedule.

This partnership highlights Acme Mills' ability to supply specialized fabric solutions that meet the client's material performance requirements, sustainability goals, and production timelines.

Project Specifications

- ⚙️ **Material:** Extra-stiff Dymetrol, white suspension fabric
- ⚙️ **Dimensions:** 86 inches total width (82 inches usable width)
- ⚙️ **Use Case:** Seating solutions for healthcare, corporate, and public spaces, including modular and lounge seating
- ⚙️ **Scalability:** High volume custom converted material available



Manufacturing Details

1. MATERIAL PREPARATION

Base Material: A woven polyester/Hytrel composite with a reinforced structure designed for high-stress applications.

Fiber Composition: Carefully blended to achieve optimal stiffness, elasticity, and tensile strength.



2. WEAVING AND FINISHING

Weaving: The Dymetrol fabric was woven using precision looms to create a consistent, uniform pattern that supports weight distribution.

Finishing: A stiffening treatment was applied to achieve the client's exact stiffness specifications without compromising flexibility or performance.



3. SLITTING AND RE-ROLLING

The woven fabric was slit to 82 inches of usable width and re-rolled into 50-yard rolls for ease of handling.

Each roll was inspected during re-rolling to ensure consistent length, tension, and edge quality.



4. PACKAGING AND LOGISTICS

Rolls were moisture-protected and securely wrapped to withstand transport.

All shipments were labeled according to the client's specifications, with skid counts and carton counts clearly documented on each bill of lading. Deliveries were scheduled to avoid Friday shipments requiring forklift unloading unless pre-arranged.





Quality Control Steps

Incoming Material Inspection

- ✓ **Material Certification:** All incoming polyester and Hytrel fibers were certified for strength, elasticity, and compliance with environmental regulations.
- ✓ **Dimensional Accuracy:** Initial fabric rolls were checked for proper width and thickness before production.

In-Process Inspections

- ✓ **Weave Consistency:** Visual and mechanical inspections ensured uniform weave patterns and edge alignment during weaving and slitting.
- ✓ **Structural Integrity:** Random samples underwent tensile and load-distribution tests to validate the material's ability to withstand prolonged use in high-traffic environments.

Final Inspection

- ✓ **Visual and Mechanical Assessment:** Each roll was assessed for defects, such as fraying or inconsistent weave tension, before packaging.
- ✓ **Labeling and Packaging:** Final packaging was checked to ensure correct skid and carton counts, with clear labeling for seamless inventory management upon delivery.

Project Highlights

- ✓ **Enhanced Durability:** The extra-stiff Dymetrol fabric was designed to withstand continuous, high-weight loads, ideal for public and commercial seating.
- ✓ **Customization Capability:** Acme Mills' precise slitting and finishing processes ensured the material met the client's specifications for width, stiffness, and usability.
- ✓ **Sustainability Commitment:** The fabric's compliance with environmental standards supported the client's focus on sustainable manufacturing practices.
- ✓ **Reliable Supply Chain Coordination:** Acme Mills maintained a consistent production and delivery schedule across six release dates, ensuring uninterrupted integration into the client's assembly workflow.



ACME MILLS
World Class Textile Solutions

Custom Woven Seating Material for Commercial Furniture Applications

This project demonstrates Acme Mills' ability to deliver innovative, high-performance textile solutions tailored to the commercial furniture industry. By leveraging advanced weaving technologies, rigorous quality control, and precise customization, Acme Mills supplied a durable, reliable fabric that enhanced the client's seating products. This collaboration reinforced Acme Mills' reputation as a trusted provider of specialized textiles for demanding applications in high-use environments.

Contact Acme Mills

Need assistance in maximizing manufacturing efficiencies to ensure quality and optimize costs? Call or email us today and one of our skilled team members will lead the way. (800) 521-8565 ~ info@acmemills.com