



AUTOMOTIVE SEATING SOLUTION: A WHITE PAPER

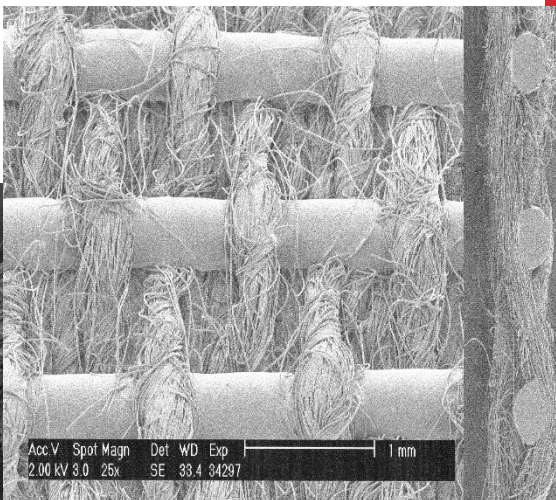
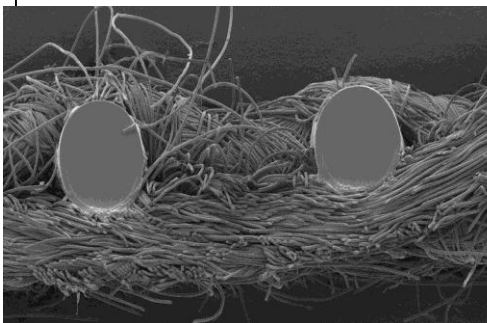
The automotive seating suspension known as Dymetrol® is the award-winning solution for automotive seating. Dymetrol automotive seating materials provide unmatched comfort, weight savings, space savings, durability, and design flexibility.

Recently, Dymetrol fabric has become the ideal solution to lighten up automotive seating as designers strive to remove weight from vehicles to meet the new CAFÉ standards. Dymetrol automotive suspension system fabrics allow designers the weight and space savings they need without sacrificing durability, comfort or safety.

What is Dymetrol?

Dymetrol fabric is a seating suspension system developed in the USA by DuPont® and manufactured and sold exclusively by Acme Mills Company, a division of the Acme Group that has been serving the automotive industry since 1917.

Dymetrol suspension seating fabrics are constructed with a sateen weave of polyester yarn and DuPont Hytrel®, an exclusive elastomeric sheath core yarn. The yarns are heat set together, creating bond points that act as spring sets. This produces a suspension system that is stronger than



A fabric suspension system developed in the USA by DuPont®. Manufactured and sold exclusively by Acme Mills Company.

An ergonomic, economic and ecologic suspension system for all types of seating applications.



The Exclusive:

Dymetrol Company

Markets Served:

- Automotive
- Aviation
- Furniture
- Mass Transit
- Marine
- Industrial

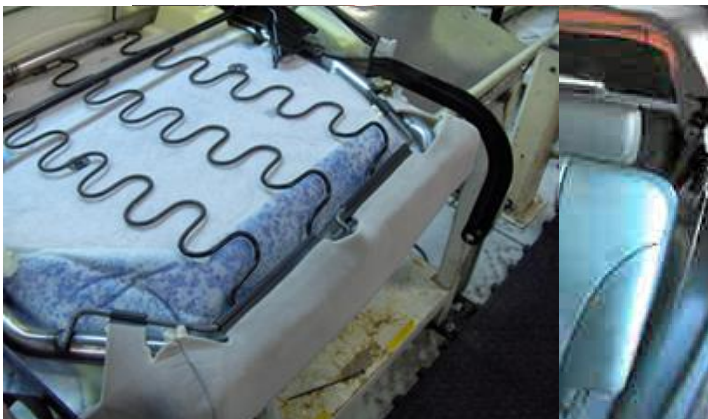
any standard spring set system and that will not deform or sag over time, unlike conventional suspensions.

Light-weighting

As light-weighting efforts ramp up, the Dymetrol suspension seating system is the perfect solution for fuel and space savings without compromising comfort or safety. These automotive fabrics typically realize savings of approximately 20 lbs. per vehicle, depending on the application.

Traditional Suspension		Dymetrol® System	
Part	Weight	Part	Weight
12 springs	553g	Dymetrol®	285g
Wire Grid	241g	Foam (PU)	1021g
Insulator	54g		
Foam (PU)	2155g		
Total	3003g	Total	1306g
Weight Savings = 1.697kgs Cost Savings = 15%			

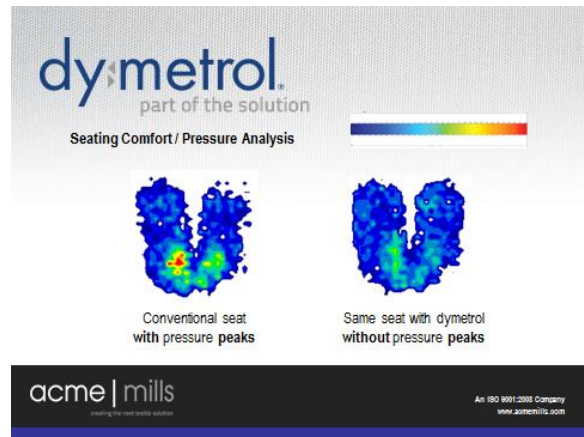
A single piece of Dymetrol fabric can replace the springs, wires, clips, and insulators reducing the amount of foam used in an automotive seat.



Replace bulky spring and foam sets
Lower profile = cost and space savings

Comfort

The automotive fabric known as Dymetrol is a simple sateen weave that utilizes DuPont's proprietary yarn Hytrel®. The Hytrel automotive material fabric is a coextruded elastomeric yarn that uniquely creates bond points during the textile finishing process. These bond points act as individual spring sets that disperse weight load and eliminate hot spots, as shown in this independent pressure mapping analysis. When applied properly Dymetrol is stronger than the standard spring set and provides more dynamic strength than any other automotive suspension fabric or automotive seating material. Testing shows that, when properly implemented, the Dymetrol seat suspension system will reduce pressure points and allow for a more comfortable traveling experience. At the same time, this system creates automotive weight savings, increases durability and frees up valuable space.

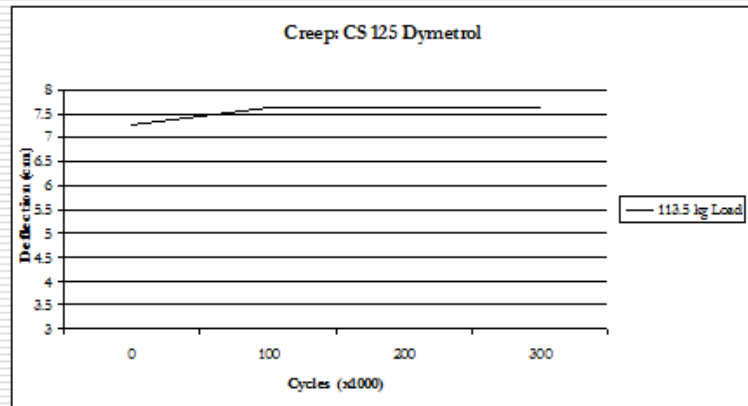


Durability

Independent laboratory tests show that the Dymetrol automotive seating suspension system will outlast conventional steel springs by a factor of nearly 6 to 1. One of the characteristics of the elastomer is the spring action created by the individual bond points and the material's resistance to creep, or permanent deformation. Very low creep, for Dymetrol fabric, means that the product will not sag with time. The automotive fabric is pre-stretched 5% when installed, which results in an automotive seating suspension that will provide superior comfort for the life of the automobile.

Time and again, Dymetrol automotive seating fabric has proven its superior comfort and durability. A Tier 1 automaker used the Dymetrol automotive fabric in a fleet of taxi cabs in Nevada and Florida. This was a test to quickly determine how the Dymetrol suspension would stand up in extremely demanding conditions. Dymetrol never failed – even after 80,000 miles and constant, 24-hour-a-day use. Suspension recovery and support remained superior in every tested seat.

DYMETROL



The Dymetrol automotive fabric will not unravel or fray even when cut with a knife due to the patented finishing process.

Another attractive attribute to designers is that utilizing this automotive fabric will eliminate squeak and rattle issues. Currently there are 21 million cars on the road utilizing Dymetrol without a single warranty claim.

Design Flexibility

Working with Dymetrol automotive material eliminates zigzag wires, clips, springs, insulators and foam. One piece of Dymetrol automotive fabric can replace as many as 4 part numbers from a bill of materials. Installation time and tooling requirements are also reduced, creating manufacturing efficiencies that lower cycle times.



Because conventional seating components are not required, the design possibilities increase greatly. Designers are no longer stuck with bulky foam seat designs. The Dymetrol automotive suspension system allows for low-profile, elegant seat designs while freeing up cabin space.

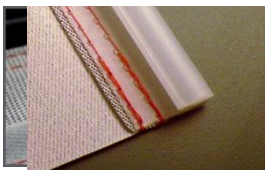


Because of these attributes, Dymetrol automotive seating fabrics were awarded the coveted Interzum Award in the Materials and Surfaces category.

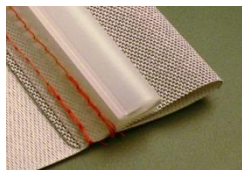
Installation

Our Acme engineers work closely with seat designers to provide all the technical assistance and prototyping needed to make a seamless design transition.

Common attachment methods:



Sewn w/ custom



Hooks
Sewn "J" retainer
"J" retainer w/
Cutout w/ wire



loading loop



plastic profile

The Acme Group is a collection of textile, converting and fabric companies serving the business-to-business needs of industry. Acme Group draws on the engineering, technical

experience and capabilities of Acme Mills, Fairway Products and Great Lakes Filters, the main members of the collective.

Please contact one of our Application Engineers today at info@acmemills.com.