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Today's Powerful Polyester

There can be no question that face fiber is the backbone of a carpet's construction. Although color, stain resistance properties, carpet construction, warranties and price remain major considerations, perhaps the biggest bang for the buck in terms of customer satisfaction stems from what a carpet is capable of delivering to the end-user in terms of its overall performance characteristics. And today's polyester carpets are engineered to deliver on every front, producing warm, luxurious, aesthetically pleasing carpets capable of holding-up for many years to all the rigors and demands carpet is subjected to in the home, often at a price less-costly than similarly constructed carpet using other fiber types. Polyester can also be combined with other fiber types, principally nylon, to produce a brilliantly colored, very durable carpet.

From the cradle point, polyester, which was introduced in the U.S. in 1953, is a thermoplastic polymer derived from petroleum. Polymerization occurs when petrochemical constituents terephthalic acid (an organic acid) and ethylene glycol (an alcohol) are joined together in a vacuum at high temperatures to form P.E.T. (polyethylene terephthalate) polyester. P.E.T. polyester "chips" are made from this product and these chips are heated to form a polymer melt that is then extruded and solidified ("melt spun") into fiber. This same versatile polymer is used to make soft drink bottles, curtains, sheets and pillowcases, furniture and fiberfill for pillows and furniture, tire cord, thread, etc. In its natural state polyester is slightly off-white and transparent in appearance.

The use of polyester in carpet, which is available in staple and filament, continues to grow in the textile floor covering industry. Polyester absorbs very little moisture, making it inherently resistant to water-based stains. This characteristic makes clean up of spills very easy and effective! Unlike nylon, that has dye sites along the fiber designed to chemically bond with acid-based dye molecules; polyester takes on colorants that migrate into the fiber by disperse dyeing under pressure. Polyester can also be solution dyed. Because polyester has inherent and permanent stain resistant properties it does not require the use of additives to give it stain resistant properties. However, by adding our proprietary PermaShield treatment to our Beaulieu polyester carpets we ease the cleaning process of these carpets by helping to delay the penetration of both spills and soils.

Polyester is also resistant to a wide-range of chemicals, it is very colorfast to light and ozone gas, easy to clean, provides very good dimensional stability, resists abrasion, shrinkage and stretching, and is inherently very static resistant and heat resistant. Polyester is also known for its bright, vivid colors, and color retention properties.

So what makes today's polyester more durable that its ancestor? One reason is the more viscous make-up of this fiber. The other reasons have a lot to do with early floorcovering styling trends and how this fiber was constructed.

When polyester was re-introduced in the mid-late 60's loosely constructed "shag" carpets were in vogue and these polyesters did not respond well to the initial twist and heat setting processes and these carpets subsequently suffered from a lack of resiliency. The results of this were many, many consumers who were very quickly angst over the appearance and performance of their carpet and soon began enumerating on the shortcomings of this fiber. The rest is history: polyester took an unjust bad rap and for many years all but disappeared from the textile floorcovering market.

Polyester arose from its torpor during the 1990's. Coupled with crimping, twisting and heat setting this fiber was reengineered to perform and was quickly recognized by many as now being capable of providing consumers with the best over-all combination of features the matters most for their floor covering needs. In fact, very reliable mechanical wear testers have shown that at 20,000 simulated foot traffics (the benchmark for appearance rating evaluations of all fiber types after traffic) today's polyester is a very durable, high-quality fiber.

In a world where environmental management is now much more than a phrase, and who's populace has become increasingly aware of ever increasing demands for commodities diverting sustainable materials from landfills is a growing practice. And although carpet viewed from a product waste to energy standpoint does not fit the need at this time, carpet can be reclaimed and recycled by means of shredding, pulverizing and extrusion into new fiber and new carpet backing.

Conscientious carpet manufacturers who practice product stewardship manufacture products with emphasis on high quality, the use of more recyclable materials, and cleaner, more efficient manufacturing processes. Today's recycling technologies allow carpet manufacturers to meet these responsibilities by recycling polyester from post-consumer soft drink bottles that have been cleaned and sterilized and then ground back into chips. The same features of raw P.E.T. material are not affected by the recycling process. Carpets made from recycled polyester still provide consumers with the same high quality and will deliver years of outstanding performance.