CARPET FIBERS: POLYESTER

INTRODUCTION

A few years ago, the slogan for polyester fibers might have been, "We're number three. We try really hard." After being a distant third to nylon and olefin, polyester's market share has grown in the last few years. Nylon is still #1 in sales by dollars, but polyester is now #1 in actual volume of fiber sold. If we look just at residential carpet, polyester has a big lead. Nylon's large lead in carpet installed over the years has been eroded and there is now as much polyester on the floors we are cleaning. These figures are based on PET (polyethylene terephthalate) fiber and do not include close relative PTT or triexta fiber.

Traditional benefits of polyester fibers include:

- A soft "hand" or feel when used in thick cut-pile carpet
- Can be dyed to a wide variety of bright, clear colors
- Resistance to water-based stains and soil
- Economical cost

Colored polyester fibers

As with other synthetic carpet fibers, polyester is relatively resistant to abrasion, resistant to damage from most chemicals likely to come in contact with a carpet, and resistant to mold.

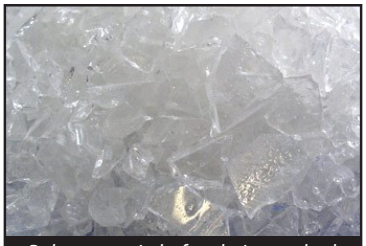
In addition to carpet face yarns, you'll find polyester used in moderately priced upholstery including microfiber.

HISTORY OF POLYESTER

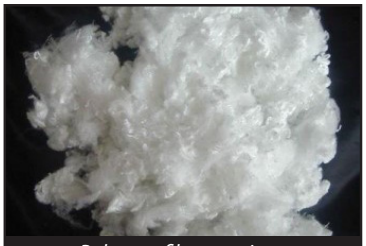
PET (polyethylene terephthalate), today's most popular variety of polyester, was first made in DuPont labs in 1934. This polymer did not suit the intended purpose of substituting for silk, so DuPont did not proceed with this fiber. PET polyester was re-invented some years later in England. In 1953, DuPont began manufacturing PET under a license agreement. They called their fiber Dacron, one of many trade names that polyester has been known as over the years.

Besides carpet, upholstery and drapery fibers, polyester is used in a variety of every day products including plastic soda pop bottles. Mohawk uses millions of recycled pop bottles daily in the manufacture of carpet. Great for the environment, a feature often promoted by sellers of polyester carpet.

Improvements have been made to polyester fibers in recent years. If you drink bottled water, you may have noticed the material the bottles are made from has gotten thinner and the plastic does not turn white as easily where dented. This is due to tougher, more resilient polyester.



Polyester resin before being melted and spun into fibers



Polyester fibers cut into staples and blended

A decade ago, most polyester carpet was made from staple fibers. This allowed better blending of different dye batches and more even color. Staple fibers also had a softer "hand" or fell. Today almost all polyester carpet is bulked continuous filament (BCF).

CLEANING POLYESTER FIBERS

Polyester can be cleaned with hot water extraction but encapsulation is also effective. Dry soils and water based soil release rather easily. Polyester does have an affinity or attraction for oily soils, so a prespray that includes solvents or a solvent booster is a good idea. Heat and dwell time are also important to help loosen oxidized oils. More frequent cleaning and use of a prespray that works well on oils and greasy is suggested.

Prespray with a pH of 10.0 or less work but higher pH products are successful because the alkalinity helps cut through oily soil. I suggest Flex Powder with Citrus Solv or Traffic Slam. Flex Ice is an excellent rinse for polyester.

Cleaning temps that are safe for other synthetics are suitable for polyester. So, is there any 'bogeyman' to watch out for? Definitely, yes. Despite engineered in performance improvements in recent years, polyester is still not as resilient as nylon and is also prone to crimp loss. Over time, traffic stretches the fibers removing the crimp that provided bulk and loft. The stretched out fiber now looks flat and lifeless. Colors lose their boldness. Cleaning cannot correct this. Be sure to adjust customer expectations accordingly.

Crimped and uncrimped fibers