

## AVORA, TREVIRA, AND JUST PLAIN OLD POLYESTER

I've been doing a little research lately, in regards to Avora and Trevira polyester fabrics. I thought it would be interesting to find out what distinguishes them from each other and from the old garden-variety polyesters.

Apparently, there was initially one fabric called TreviraFR. At some point, the company that manufactured TreviraFR split into two completely separate companies. One company began making "Avora®FR" (typically referred to as "Avora") and the other began making "Trevira CS®" (typically referred to as "Trevira"). However, from everything I have read, it appears that both fibers are manufactured in the same way.

During the manufacture of the fiber, an organic phosphorus compound is added to the polyester polymer, changing the chemical structure of the polyester fiber. The resulting fiber has a lower melting point than "regular" polyester fibers, which causes the fibers to melt away from the flame. This means less combustion, fewer melting drips, and self-extinguishment.

Because the flame retardant compound is added during the manufacture of the fibers themselves (rather than during the weaving process of turning fibers into fabrics), the fibers (and the resulting fabrics) are considered inherently and permanently flame retardant. The flame retardancy will not be removed through washing or dry-cleaning.

By comparison, "regular" polyesters do not have the extra organic compound added to the chemical structure of the fiber, and therefore they are not considered "inherently" flame retardant. While as a general rule most polyesters tend to be permanently flame retardant (as opposed to many natural fibers, such as cotton, which are considered non-flame retardant unless topically treated after milling), not all polyester fabrics are permanently flame retardant. Some are, some are not. Some factors that may affect the flame retardancy of a polyester fabric are: the fabric weight, the type of weave, and the nap (if any). Those that are permanently flame retardant are generally referred to as "durably flame retardant," meaning that the flame retardancy is long-lasting and generally will not be removed by normal washing and dry-cleaning. In other cases, the polyester is not flame retardant at all unless topically treated for flame retardancy in the same manner as cotton. When that occurs, the flame retardancy is not permanent. It will be removed through cleaning and through normal wear and tear, requiring periodic retreatment to maintain its flame retardancy.

Not surprisingly, fabrics made from Avora and Trevira fabrics tend to be a little more expensive. Why? Because of that extra step in the fiber manufacture, in which the chemical structure of the fiber is changed to increase its flame retardancy. Does this mean that a fabric made of “plain” polyester, or of cotton, is a lesser choice? Not necessarily. It just means that you should understand what you are buying and, if you are not sure of flame retardancy specifications of that fabric, ask for clarification from your fabric or drapery supplier.