



NONWOVEN TERMS

For the informed employee

Bicomponent Fiber

For many years fibers have been blended to make fabrics that contain properties of both fibers. A good example is the cotton/polyester blend common in shirts. Wouldn't it be great if two polymers could be blended in the same strand of fiber? That is what a bicomponent fiber is. Bicomponent fibers, or Bico, are always synthetic fibers, since they have to be extruded. They are not blends like chocolate milk, but rather separate polymers within the same fiber like a candy bar with nougat on the inside and chocolate on the outside. Bico is formed by extruding one type of polymer on the inside of the strand and another type on the outside. See the pictures.

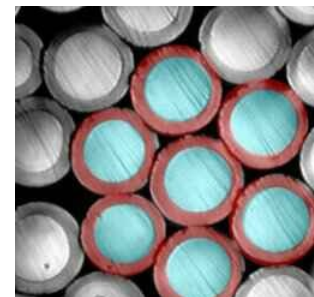
Bico fibers are made for several purposes. Three primary ones are:

1. A low melt thermoplastic like polyethylene is on the outside and polypropylene or polyester is on the inside. When heated in an oven, the polyethylene melts and bonds the other fibers together.
2. If the interior fiber is not centered, but offset to one side, it can cause the filaments to have an enhanced crimp, even three dimensional crimps are possible.
3. A very complex extrusion called a segmented pie or another called islands in the see is used to make micro denier fibers. Through mechanical or chemical means, these filaments are split producing extremely fine fibers.

The technology of spinning the fibers has improved so dramatically that all kinds of shapes can be made. See the chart.

FAMILY	BICOMPONENT FIBERS					
	VARIANTS					
CORE & SHEATH	50/50	20/80	ECCENTRIC	TRILOBAL	CONDUCTIVE	
SIDE BY SIDE	50/50	20/80	MIXED VISCOSITY	ABA	WOOL MIMETICS	TRILOBAL OR OTHERS
TIPPED	TRILOBAL		CROSS			
MICRO-DENIER	SEGMENTED PIE	ISLANDS-IN-A-SEA			STRIPED	
MIXED FIBERS	COLORS		DENIERS, COMPONENTS, GROSS-SECTIONS		BICOMPONENT/HOMOFILAMENT	

<http://www.hillsinc.net/images/Bicotable2.gif>



<http://www.swicofil.com/images/bicofiber.jpg>



<http://www.stadsing.com/gfx/brugerupload/documents/WHAT%20IS%20MICROFIBER%20%28BH%29.pdf>

“The greatest part of our happiness depends on our dispositions, not our circumstances..”

Martha Washington

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