Over-Dyeing or Piece-Dyeing Assembled Garments

The question of what thread to use in garments prepared for dyeing after they are assembled is being asked more frequently. Careful consideration should be given to this question because not all thread types will dye the same resulting in a contrasting thread when compared to the product it is being sewn into. Most products being piece dyed are 100% cotton fabrics which generally should be sewn with 100% cotton sewing threads. But what size, type, finish, and color thread should be recommended?

Below is a list of factors that should be considered when selecting 100% cotton threads.

Thread Size and Strength

Today, it is far more common to assemble garments with polyester sewing threads rather than cotton sewing threads because cotton sewing threads are much weaker than polyester threads of the same size, and they are generally are available in a larger color spectrum. However, when you are constructing 100% cotton garments that will be Over-dyed or Piece-dyed, then you MUST use 100% cotton sewing threads. Generally, because cotton has a much lower tenacity than polyester, a larger cotton thread will be required to attain the same seam strength. For example, a T-40 Perma Core has an average break strength of 4.6 lbs., where a T-80 Anecot-Plus soft cotton thread breaks at approximately 4.4 lbs. Notice that the cotton thread Tex size is twice the size of the core thread even though they are approximately the same strength. This is due to the difference in tenacities between cotton fiber and polyester fibers.

Grade of Cotton Fiber

100% Cotton sewing threads can be made from either Pima (SAK) cotton or Peeler (CP) cotton. SAK cotton threads are stronger than CP cotton threads of the same size and are recommended where you need a higher strength thread to replace a polyester thread when Over-dyeing assembled garments. If these grades of cotton threads are mixed on the same garment that is being over-dyed, these two types of cotton may dye a slightly different shade especially on light pastel shades. If you are sewing a T-Shirt that will be over-dyed, we recommend that you use a T-30 Anecot Plus to replace a T-21 spun polyester or T-18 Wildcat Plus. Obviously a T-30 size thread will require a slightly larger needle than a T-21 or T-18, which may contribute to more needle cutting. However, a T-30 Anecot Plus thread will generally be required to give adequate seam strength.

Anecot X-tra	T-50, T-80, T-105	Most durable 100% cotton thread for overdyeing
Anecot Plus	T-30, T-40, T-50, T-60, T-70, T-80, T-90, T-105, T-135	Pima (SAK) for general Over-dyeing applications
Anecot	T-30, T-40, T-50, T-60, T-70, T-80, T-90, T-105	Peeler (CS) for general Over-dyeing applications - Lower tenacity than Anecot Plus, but less expensive. - Not as durable as Anecot Plus or Anecot X-tra

100% Cotton Thread Finishes

Cotton sewing threads are usually available either ‘Soft’ or ‘Mercerized’. Mercerization increases the thread’s affinity for dyes and even makes the thread stronger. However, most fabrics that are used to make the garment are not made from mercerized cotton yarns; therefore, ‘soft’ cotton threads are normally used.

‘Soft’ or ‘Mercerized’ threads can be ordered either ‘natural’ or ‘bleached white’. If the garments are made from bleached fabrics then most manufacturers will use bleached sewing threads. Most of our bleached 100% cotton sewing threads also contain an optical brightener. If bleached threads without an optical brightener is needed, then this will have to be specially processed, which will take more time to manufacture.

Many manufacturers prefer using natural cotton threads so they can segregate the 100% cotton thread from the 100% polyester threads on the sewing floor. This is because both ‘bleached white’ 100% cotton threads and 100% polyester threads are both white and can easily be mistaken for one another. Polyester sewing threads will not accept the 100% cotton dyes used in the over-dyeing process.

Summary

From the preceding comments, you can see that there are a variety of cotton threads available, and each variation may slightly change the shade when piece dyeing. We suggest that you test your components to insure you will obtain the desirable results.