

## **Embroidery Threads**

Most new Embroiderers purchase a startup kit with their equipment that contains one type of thread. They start with and continue to use this same thread as if it's the only style available, without ever considering if there is a better alternative. As it turns out, there are several types and styles of thread and the professional Embroiderer needs to be aware of their characteristics and applications.

Commercial embroidery threads are most commonly grouped by fiber content as follows: rayon, polyester, metallic and cotton. Within each fiber group, threads are available in different thicknesses or weights.

Weight is an important consideration, as it can affect the visual quality of a design. 40 weight is considered the standard for the industry. A higher number is thinner, while a lower number is thicker. Most designs are digitized with a 40 weight thread in mind. For example, a large area designed to be filled with stitches created using 40 weight thread, would appear nice and solid upon completion. If the Embroiderer switched to 60 weight thread, which is not as thick, then the "filled" area would have many gaps. One trick for reducing thread counts is to use a heavier thread such as 35 weight. Because it is thicker, fewer stitches are needed to cover the same area than if a 40 weight thread were being used.

NOTE: This discussion is focused on the "top" threads. Bobbin threads will be addressed later.

### **Rayon**

Rayon thread has been the mainstay of the commercial embroidery industry for many years. It is soft, brilliant and durable. Rayon is available in a wider range of colors, than any other thread. It can withstand dry cleaning and multiple washings. However, some colors do not resist bleach very well.

40 weight is considered the standard for rayon. Several manufacturers offer it in other weights such as 60, 35, 30 and 12. 60 weight rayon is ideal for creating smaller detail work. To be successful, it should only be used with a smaller needle such as a 60 or 65. When using a heavier weight thread such as 30 or 35, a larger needle will be required.

### **Polyester**

Polyester thread has gained popularity in the last few years and is fast overtaking rayon as the thread of choice amongst commercial Embroiderers. Though not available in as many colors as rayon, there are still a wide range of choices, with more being added every year by the manufacturers. Polyester thread is considered more durable than rayon and can withstand the harsh effects of bleaching. This makes it the ideal choice for garments that will undergo frequent washings, such as service uniforms that are worn in "dirty" environments.

Like rayon, the standard weight for polyester is 40. Some manufacturers offer it in 30 weight as well. Because polyester is slightly stiffer than rayon, fine design details may need to be digitized differently when using it.

Another characteristic of polyester thread is that it is more elastic than rayon. Thus, some stretching followed by rebounding can occur while sewing. The result is tiny loops forming on top of the embroidery design. Therefore, the thread tensions should be increased (on the machine) to control this problem.

## **Metallic**

Metallic thread is a specialty thread that is used to create unique textures and special effects. Their construction is very unique and they come in three different variations: core-wrapped, twisted and flat-foil. All of them have some sort of foil used in their construction. These foils are generally metalized polyester. Core-wrapped is the most common and gives the smoothest, most even shine. It's created by wrapping the foil around a core yarn of rayon, polyester or nylon, resulting in a round thread with a metallic covering.

Metallic threads can be difficult to use. They are less flexible than rayon or polyester and do not flow easily. In fact, there is a tendency for them to "kink" while sewing which leads to thread breaks and "birdnests". Thus, when sewing with metallic thread, slower machine speeds are required along with the undivided attention of the machine operator.

Once again, 40 weight is the most common size. However, even though it's approximately the same thickness as a 40 weight rayon, the density of an area sewn with metallic should be programmed 5 to 10 percent less than if rayon were being used.

## **Cotton**

Rayon and polyester threads are known for their high luster finishes. Cotton on the other-hand has a low luster, almost dull finish. This can be quite useful for creating different looks. It is available in many weights, with 40 being the standard, but a limited number of colors. It withstands repeated washings very well, but not bleaching. Cotton is an excellent choice for sewing designs with high detail. It's also very useful for creating designs where the desire is for a low key, understated appearance.

## **Thread Care**

Thread should be stored in a cool, dark location. Manufacturers suggest a humidity level of 40% to 60% and a temperature ranging between 50 and 70 degrees Fahrenheit. Direct sunlight is also not good for thread, as it can cause discoloration over time. Threads should also be kept covered to prevent dust and lint buildup, which will cause the thread to soften, which leads to thread breaks. Thread tends to be somewhat tender. Dropping it will cause "bruising" where the thread contacts the floor. This is actually a weak spot that will cause thread breaks during sewing.