Measure Your Sew-How

Thread Tips

Texas Agricultural Extension Service · The Texas A&M University System · Daniel C. Pfannstiel, Director, College Station, Texas
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There's more to thread than fits through the eye of the needle. The variety of threads available are designed to suit every sewing need and to be compatible with every kind of fabric.

There are two basic types of thread—natural and synthetic. The most common natural threads are cotton and silk. The most popular synthetic thread is polyester although nylon and rayon are used for special purposes. The synthetic threads have gained popularity because they are strong, more elastic and have greater abrasion resistance than the natural fiber threads.

Threads are made in a number of ways. Cotton thread is spun from relatively short cotton fibers. Silk is usually made by twisting together several long filaments. This is called multifilament thread. Synthetic threads may be spun or multifilament; or they may be monofilament or core-spun. Monofilament thread is a single strand of the size desired. Core-spun thread has cotton wrapping spun around a polyester core, giving the advantages of both fibers (see Figure 1).
With the exception of monofilament thread, threads are held together by twisting. The amount and direction of twist helps determine the strength and sewability of the thread. The direction of the twist is called "S," right hand, or "Z," left hand. "Z" twist is the most common and may be called ordinary twist. "S" twist threads are primarily designed for specialized industrial sewing equipment (see Figure 2).

Figure 2

Types of Thread

No one thread can be used successfully on every fabric. For best results, the thread must respond to different conditions in a manner similar to the fabric. Some threads are designed for special uses that require a special characteristic.
Cotton. Cotton thread has very little stretch which makes it ideal for sewing on cotton and linens without permanent press finishes. Cotton thread also shrinks slightly similar to cotton and linen fabrics, but has greater shrinkage than permanent press and synthetic fabrics. Cotton threads are mercerized to give them added strength and luster, and to make them colorfast. Cotton is easy to sew with because it is smooth and does not tangle easily. Cotton threads are sized by an indirect system—the smaller the number, the larger the thread. Cotton is available in a range of sizes from fine to heavy duty.

Silk. Always a luxury thread, silk has two characteristics that make it perfect for sewing wool and silk. It stretches, but unlike synthetic fibers, it remains stretched and molds to the shape of the fabric. This is essential in tailoring. Silk is also strong even in fine sizes so it can make a flat, even seam in the most delicate fabrics. Because it is lint-free, silk is excellent for basting, but since some dyes used for silk are not colorfast, only light shades should be used. Silk is sized by a lettering system. Size A is used for general sewing.

Spun polyester. These were among the first synthetic threads made. They are still available, but are coarser and rougher than other kinds of polyester thread on the market. Like all polyester threads, they are strong, have good abrasion resistance and have the same degree of stretch and recovery as synthetic fabrics.

Core-spun polyester. In great demand for general sewing, cotton-wrapped polyester thread has the smoothness, luster and sewability of cotton and the strength, elasticity and abrasion resistance of polyester. It is compatible with many of today’s knit, permanent press and stretch fabrics. Core-spun threads are usually mercerized. Size is not marked on the spool, but core-spun threads are available in ordinary and fine diameters.
Long staple polyester. The newest thread on the market, long staple polyester thread is a smoother, finer thread than spun and most core-spun polyesters. It has improved recovery from stretch and is stronger. It is particularly suited to light-weight knits and wovens and compatible with most other fabrics. It is not marked with a size.

Specialty threads. Buttonhole twist is exactly three times the diameter of regular sewing thread. Silk buttonhole twist is beautiful because of its clear colors and luster. The colors are often not fast to laundering, however. Polyester buttonhole twist is colorfast but lacks the sheen of silk. Both are used for topstitching, hand-worked buttonholes and sometimes for sewing on buttons, snaps and hooks. It may be used to hand pick zippers in place, too.

Nylon thread, sometimes called lingerie thread, is designed for sewing on nylon tricot and other lingerie fabrics. The thread has the same characteristics as the fabric so they work well together.

Invisible thread is a semi-transparent monofilament nylon, useful for hems and machine quilting. It is also used in crafts.

Machine embroidery thread is designed to fill in smoothly and evenly without building up or breaking. It may be cotton, rayon, long staple polyester or core-spun polyester.

Quilting thread is strong and has a glace finish to help reduce knotting. It pulls through with less resistance than ordinary threads. Quilting thread is used for hand quilting.

Metallic thread is for decorative sewing and topstitching. It may be used also for machine embroidery.

Elastic thread contains rubber core yarn and is designed for shirring that retains stretch. Uses are limitless and may be functional or decorative.

Button and carpet thread is a heavy duty, strong, glace-finish thread used for sewing on buttons, in joining carpets, upholstering by hand and wherever an extra-strength thread is needed.
Determining Quality

The quality of thread is determined during use. If a thread does not perform well, it may be because of poor quality or improper use. Check both before assuming the thread is at fault. Features that determine quality are:

- sewability or easy to work with
- strong enough not to break in the machine
- good color selection, colors fashionable
- smooth, uniform texture
- does not tangle or knot
- does not fray, shed, split, separate or fuzz
- long lasting, washes well, does not bleed color or shrink
- good finished appearance in fabric
- reasonably priced
- good overall performance, sews smoothly into even stitches, does not skip or drag.
Tips to Make Sewing Easier

Spool yardage varies among manufacturers and thread type. Check yardage on spool for appropriate amount to do job.

Select the correct type of thread for the fabric weight and fiber content. A color slightly darker than the fabric usually is least visible.

Use a contrasting color, or several colors, for hand basting so they will be easy to find and remove after the garment is finished.

For easy threading, cut the thread on a slant. Never bite or break thread as it frays the end.

Select needles with eyes large enough for the thread. A small eye frays the thread and causes breakage.

To help prevent snarls, knots and breaks while hand sewing, cut cotton and silk threads no longer than 24 inches. Cut polyester and other synthetic threads 18 inches or less; they snarl more easily because of their elasticity.

Thread the needle so the thread is used in the same direction it comes off the spool. This usually helps keep the twist in the thread as it is pulled through the fabric (see Figure 3). If knotting continues to be a problem, try using the thread in the opposite direction.
When a double thread is needed, cut two lengths of thread to 24 inches long according to the type of thread. Thread the needle with both threads in the direction they come from the spool. Keeping the twist of both strands in the same direction reduces knotting and snarling (see Figure 4).

Sew loosely, pulling the thread through the fabric smoothly. Jerking and pulling too tightly causes the thread to snap back on itself and knot or break.

When machine sewing, be sure the needle is the correct size and type for the fabric and thread. If the thread breaks, check the needle for a burr or rough eye; replace the needle with a new one to correct this problem.

Pull both the top and bottom threads to the back or one side before stitching to prevent snarling in the bobbin case.

For a perfectly balanced stitch, use the same type of thread for both top and bobbin. Exceptions are specialty threads used for a specific purpose.

Be sure the top and bobbin case are correctly threaded. The needle should be straight and secure.

Stitch slowly and evenly, increasing speed gradually for smooth stitches and minimum thread breakage.

Stitch a test seam to check for unbalanced stitches, puckering, uneven feeding and skipped stitches. Adjust machine until a satisfactory test seam can be made.
## Thread and Needle Selection Chart

### Natural Fiber Fabrics (Not Permanent Press)

<table>
<thead>
<tr>
<th>Fabric Type</th>
<th>Thread Details</th>
<th>Needle Sizes Machine*</th>
<th>Needle Sizes Hand (Customary/Metric)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>Light weight organdy, net, lace, dotted swiss, chiffon, voile</td>
<td>Cotton, size 50 or 60 or core-spun polyester (fine) or long staple polyester</td>
<td>8-10 11/75-80</td>
</tr>
<tr>
<td></td>
<td>Medium weight T-shirt knits, seersucker, flannel, crepe, muslin, chintz, pique, velveteen, eyelet, terry cloth, satin, gingham</td>
<td>Cotton, size 50 or any polyester thread</td>
<td>7-9 14/85-90</td>
</tr>
<tr>
<td></td>
<td>Heavy weight denim, burlap, quilted, sailcloth</td>
<td>Cotton, heavy duty or core-spun polyester or spun polyester</td>
<td>4-6 16/100</td>
</tr>
<tr>
<td>Linen</td>
<td>Medium to heavy weight</td>
<td>Cotton, size 50 or any polyester thread</td>
<td>7-9 14/85-90 16/100</td>
</tr>
<tr>
<td>Rayon</td>
<td>Lightweight to heavy weight</td>
<td>Cotton, size 50 or 60 or any polyester thread</td>
<td>7-9 14/85-90 16/100</td>
</tr>
<tr>
<td>Silk</td>
<td>Light weight organdy, net, chiffon, voile, crepe</td>
<td>Silk, size A</td>
<td>8-10 11/75-80</td>
</tr>
<tr>
<td></td>
<td>Medium weight shantung, broadcloth, long staple polyester, or core-spun poly (fine)</td>
<td>6-9 11/75-80 14/85-90</td>
<td></td>
</tr>
</tbody>
</table>
### Wool & Wool Blends

<table>
<thead>
<tr>
<th>Material</th>
<th>Thread Description</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium weight crepe, knits, wovens</td>
<td>Silk, size A or long staple polyester or core-spun polyester</td>
<td>6-9</td>
<td>14/85-90</td>
</tr>
<tr>
<td>Heavy weight suitings, coatings</td>
<td>6</td>
<td>14/85-16/100</td>
<td></td>
</tr>
</tbody>
</table>

### Genuine leather and suede

<table>
<thead>
<tr>
<th>Material</th>
<th>Thread Description</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton, heavy duty</td>
<td>1-5</td>
<td>16/100</td>
<td></td>
</tr>
<tr>
<td>Silk, size A or long staple polyester or core-spun polyester</td>
<td>16/100</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use polyester or silk buttonhole twist for top stitching and hand-picked work.

### Synthetic Fiber Fabrics

#### Nylon

<table>
<thead>
<tr>
<th>Material</th>
<th>Thread Description</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lace, tricot, jersey, lastex for swimsuits</td>
<td>Nylon, core-spun poly (fine) or long staple polyester</td>
<td>10</td>
<td>11/75-80</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>14/85-95</td>
</tr>
</tbody>
</table>

#### Synthetics and blends

<table>
<thead>
<tr>
<th>Material</th>
<th>Thread Description</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light weight organdy, chiffon, crepe, challis, jersey</td>
<td>Long staple polyester or core-spun polyester (fine)</td>
<td>8-10</td>
<td>11/75-80</td>
</tr>
<tr>
<td>Medium weight satin, challis, seersucker, flannel, permanent press, crepe, craft, broadcloth, velveteen, bonded fabrics, double knits, gabardine, terry cloth, T-shirt knits, denim, synthetic suedes</td>
<td>Any of the polyester threads</td>
<td>7-9</td>
<td>14/85-90</td>
</tr>
<tr>
<td>Heavy weight denim, quilted, coatings, fake fur, sailcloth</td>
<td></td>
<td>4-6</td>
<td>16/100</td>
</tr>
</tbody>
</table>

Vinyl

<table>
<thead>
<tr>
<th>Material</th>
<th>Thread Description</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core-spun or spun polyester</td>
<td></td>
<td>1-5</td>
<td>14/85-90</td>
</tr>
</tbody>
</table>

Use polyester buttonhole twist for top stitching man-made fiber fabrics.

* Use needle of appropriate type—sharp, ball point, or leather point.
References

American Home Sewing Association, Inc. 350 Fifth Avenue, New York, NY.
"Before You Sew, Ask Yourself This Question." New York: Belding Corticelli.
"Buttonhole Twist." New York: Belding Corticelli.


"Use Poly-Bond or Else." New York: Belding Corticelli.

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