



Sewing Guidelines for Glen Raven Custom Fabrics

Sewing Questions

As our marketing representatives travel the country working with fabricators, questions related to sewing are among the most common. Fabricators are always interested in how the sewing process can be made more efficient and more productive and how they can create quality results for customers.

We want to be responsive to questions related to sewing and to assure you that we take steps that make Sunbrella® and other Glen Raven fabrics easier to work with.

The most common questions relate to seam slippage, puckering or gathering and leakage. From our experience, most problems in sewing can be addressed through changes in needle or thread selection or through adjustments to thread tension and fabric feeding.

While we are not sewing experts, our marketing representatives and technical specialists have accumulated a great deal of knowledge related to the sewing of our fabrics. Following are some tips and suggestions that address the most frequently asked questions.

Sewing Threads

One of the most common concerns we hear from fabricators relates to leakage. The solution to this problem is to use the smallest needle and largest thread size possible, along with the fewest stitches per inch. This approach minimizes areas through which water can penetrate an awning or boat enclosure.

In terms of needles, we recommend ballpoint needles because the needle goes between the fibers and does not cut or penetrate them. This feature maintains the strength and integrity of the product.

While there are many options in sewing threads, the most commonly used are solution-dyed bonded polyester threads. Gortex has a premium thread on the market that offers longer life, but is also more expensive than polyester. Gortex recommends a special needle with a large scarf for use with their thread.

Stitching and Seams

In terms of stitching, for awning and marine products we recommend four and a half stitches per inch, while for furniture fabrics, we recommend six to six and a half stitches per inch.

Seaming considerations are also important, particularly for Sunbrella® Furniture fabrics. We recommend one-half inch tucked seams for Sunbrella® linen fabrics. For shadow stripe furniture fabrics where you have a combination of plain and twill weave stripes, we recommend that the plain weave be sewn to plain weave. This approach will help to reduce seam slippage.

Seam slippage can also be an issue when sewing ribbed fabrics such as Sunbrella® Rib. We recommend a minimum of ½ inch tucked seam where possible to help reduce possible slippage. For exposed surfaces, we recommend bonded seams, again to help reduce possible seam slippage.

One of the most important things that fabricators can do to assure a smooth sewing operation is to maintain an even, relaxed tension on both the top and bottom of the

stitch. Relaxed, even tension will help prevent puckering. Every sewing machine and operator is different, of course, and you will need to create conditions that are right for your sewing operations.

For awning fabrics, most fabricators use an overlap seam, which varies from ½ to ¾ inch that is either double needle or double stitched. A French hem, recommended where possible, is a tucked hem that leaves an unexposed selvage edge. Some awning and marine fabricators use various types of tapes to sew between the layers of seaming to help prevent seam leakage.

There are other seaming methods for awnings and boat enclosures, and one of the more common of these is RF welding (radio frequency). K-Bar and Thermotron are the most widely used RF machines and, if proper techniques are followed, these methods provide a good seam that is strong and resists leaking.

Glen Raven has also tested some of the newer seaming methods on the market and found that if properly bonded, strong reliable

seams can be achieved. One of the newer systems we have tested is from the Sinclair Equipment Company, which has introduced a wedge welding method that uses a special tape and radiant heat. Another new system we have successfully tested is the Miller Hot Air Sealant, which, as its name implies, uses hot air to seal seams.

Other Sewing

Recommendations

- A double-needle machine, equipped with a puller, is desirable. Needle gauge should be wide – ¾ inch if possible. Use of chain stitch is preferable in seaming the widths of fabric.
- A lock stitch machine with a walking foot is desirable for hemming.
- Avoid too much back stitching because this technique can weaken the fabric and cause the fabric to tear too easily.
- Lock stitch machines should use the same size bobbin thread as used on top.
- It is always advisable to use the smallest size needle with which the machine will stitch properly. For best results, needles should

be inspected and changed frequently.

- Use of acrylic braid fringe is recommended. A centerfold or flat woven fringe can also be used.
- To minimize puckering when seaming, tension should be maintained both in front of and behind the needle.
- Puckering is a problem of feed and thread tension. Lowering the feed dog slightly, lessening the pressure on the presser foot and a puller can reduce puckering. It is also important to make sure that the needle guide in the feed dog (hole) is not oversized. If that situation exists, the needle captures more ends in each stitch resulting in puckering.
- It goes without saying that proper orientation and training of sewing machine operators and regular machine maintenance are crucial. There are a number of good schools and other resources that fabricators can access to improve the skills of their employees.

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