



## Shade Fabric Care and Fabrication Guide

Sunbrella® has been the leading brand of awning fabric for 50 years. Available in over 150 solids and stripes, Sunbrella shade fabric is guaranteed for 10 years against color or strength loss (see [sunbrella.com/warranty](http://sunbrella.com/warranty) for details). Sunbrella shade fabrics are breathable, water repellent and easy to clean.

### Cutting

- DO NOT TEAR FABRIC. Cut with scissors or a knife. A hot knife (wire or blade) or ultrasonic cutting instruments may be used for a fused edge. Provide proper ventilation when cutting with a hot blade instrument.
- Under ordinary conditions, Sunbrella will not shrink provided the awning/canopy is undercut by approximately one half percent both in the length and the width.

### Sewing:

- For joining sewn panels, a double needle machine equipped with a puller is ideal. Needle gauge should be wide, 3/4" if possible. A chain stitch is preferable in seaming widths of the cloth.
- A lock stitch machine with a walking foot is ideal for hemming.
- For seaming and hemming, the top thread for larger applications should be a PTFE M1000HKTR or comparable polyester thread such as Tex 138 or Tex 12. For standard size awnings, top thread should be M1000KTR PTFE or Tex 92/16 polyester. Use light to medium tension on both top and bottom thread.
- Lock stitch machines should use the same size thread for the bobbin as for the top stitch.
- We recommend 4.5 to 5 stitches per inch for shade and marine applications.
- Use 92/16 thread for the looper, bobbin thread on chain stitch machines.
- Use size 22 needle with size M1000KTR PTFE or 138/12 polyester thread on lock stitch machine.
- For chain stitch machines use a Tex 138/12 thread (or comparable) and 0.60 needle. For size 92/16 thread use a 054 needle.
- It is always recommended to use the smallest size needle with which the machine will stitch properly. Inspect and change needles for best results. Thread breakage is often related to a burr in the needle and not necessarily the size of the needle itself.
- For shade/marine work, more commonly an R (regular round point), RG (round point, rounded tip) or FFG (light ball point) needle would be used. If when using an R point you notice that you are puncturing/cutting some of the warp or fill yarns in the fabric you may consider changing to an RG, FFG or other ball point needle. The ball point will tend to "push" between yarns instead of cutting them.
- Most fabricators use an overlap seam, which varies from 1/2" to 3/4" that is either double needled or double stitched.
- The use of acrylic braid or centerfold binding is recommended.
- Maintain tension in front of and behind the needle during the sewing process to minimize puckering/gathering of fabric when seaming.
- Avoid too much back stitching because this technique can weaken the fabric and cause the fabric to tear more easily.

### Heat sealing

- Sunbrella can be heat-sealed using radio frequency, wedge, impulse and hot air welding machines. When RF welding, attach a layer of teflon to the bar to prevent fabric scorching. It may be necessary to experiment with temperature, speed and dwell time settings.
- Consult the heat-sealing equipment manufacturer to determine optimum procedures and the proper heat sealing tapes to be used with a particular machine.
- Test bond strength when changing rolls of fabrics and tapes. Use a fish scale to test the bond's "peel" strength. Adhesion after 24 hours should be 4 pounds or higher. This should produce a side-to-side bond that is stronger than the fabric itself.

### Installation and Fabrication tips

- Make sure the fabric does not flap or rub against walls, posts, concrete, shrubbery, etc.
- There should be no sharp edges or rough spots on the framework to reduce wear and minimize opportunities for leakage. Reinforcements should be used where the fabric contacts the framework, especially over squared/sharp angles to reduce abrasion and possible tears.
- Rafters should be no more than 36" apart and lacing/rafter bands should be used on canopy type application, including staple in canopies, to reduce wind whip of fabric against frame which can lead to possible damage and leakage.
- The additional layer of fabric on lacing/rafter bands can help reduce or eliminate capillary action between the surface fabric and the frame in these areas.
- On canopies and other large frames, cross members should be located below the standard vertical rafters. Cross members on the same plane as the rafters restrict proper drainage, and can lead to pooling of water which may cause dirt build up and affect water repellency in these areas.
- A minimal pitch of one-foot drop for every three feet of projection is recommended for proper drainage and best overall performance of the fabric. For applications with less than optimum pitch, increase the number of rafters, install drain grommets (weepers) behind the front bar and use a double front bar to ensure maximum tension.
- For installations with less than optimal pitch, especially where a high degree of water repellency is required, Sunbrella Plus, which has a urethane back coating would be a good option.
- Installations that have underliners should have drain grommets.
- Use large enough pipe in framework to insure a stable installation.
- On re-covers of an existing frame, inspect the frame for rust, corrosion or rough surfaces. If any are found, they should be sanded, primed and painted. If not attended, to these can lead to stains and abrasion damage to the new fabric in a short period of time.
- Rope pull ups are not recommended, but if necessary the pulleys should be offset two to three inches to that the ropes "wipe" the fabric rather than concentrate their wear on one line.
- The same general rules apply to marine applications. Avoid fabric rubbing by reinforcing areas where abrasion is likely. In high abrasion areas a reinforced vinyl may give added abrasion resistance as a reinforcement material.
- Mooring poles are recommended for boat covers that span large areas to maintain adequate tension and drainage.
- Completed marine tops should be handled with care. These tops are often collapsed/folded inside of a boot, should have spacers between the framework for transport. Abrasion between the top, the boot and components is increased exponentially when transported in the upright or "radar arch" position. The mounts should be dismantled and laid on the floor for transport.

### Staple in systems

- Sunbrella is commonly used in staple-in awning frame systems. Consult your supplier for recommended staple guns, staples and staple cover (zip strip).
- Ensure that the staple gun point is all the way to the bottom of the staple channel when stapling. This will help prevent staples from "blowing through" the fabric.
- Do not cover too much area between stapled portions. Wide spans over rafters without being fastened will lead to wind whip, abrasion, leakage and eventual fabric breakdown.
- Rafter bands should be used to secure fabric to the frame across these wide spans.