

Spectra Seating

Seating Fabrication Standards

September 2020



SPECTRA
CORPORATION
COMMERCIAL SEATING SOLUTIONS

General Comments

Overview & Purpose:

As we work with customers while fabricating the various products that we produce, we are frequently asked for input/insights on fabrication drawings and designs. These notes are meant to offer guidance on how best to structure designs to produce the best fabricated custom seating and wall panel end-products. It covers most of the main issues we continuously tend to encounter.

This document is meant to share our thoughts on fabrication considerations for customers on seating design, substrate design, flat wall/ceiling panels. The information contained here is for general guidance and it is always best to discuss specific project requirements if you have additional questions or project complexity dictates.

It is our hope that this document will help educate internal engineering design teams and fabricators to generate the best end-product and component designs as well as consistency in fabrication techniques.

Design Notes--Banquettes

Banquette Framework and Cushions:

- Substrates:
 - Spectra recommended materials for back/seat cushion substrate: $\frac{3}{4}$ " thick Flake or MDF, other materials might include Plywood or FR Plywood.
 - All back and seat substrates should allow $\frac{1}{4}$ " Gap between each cushion re: length and width which is $\frac{1}{8}$ " gap all around for Example:
 - Finished Cushion size is 10" Length x 10" Width so substrate size should be $9\frac{3}{4}$ " Length x $9\frac{3}{4}$ " Width
 - Note: DO NOT deduct from edges to accommodate for foam thickness this prevents taugt cushion fabrication**
 - Air holes on Seat substrates should not exceed 1" diameter. 1" is sufficient and if larger, they can easily wear through
 - Spectra recommends the length of each substrate/cushion to be roughly 45" - 50" long (target range) in order to get the most yield out of the fabric. Most fabric widths are roughly 54" and if the fabric has a grain or pattern, with the length of the substrate over 54", you will need significantly more fabric. The target length will also cut down or prevent addition of seams that might be required with patterned materials.
 - When a bench/banquette has an angled corner, both the seat and back substrate should utilize a mitered corner. Also, if the back cushions have a wedge, mitered corners are a must!

Design Notes--Banquettes

Banquette Framework and Cushions (cont.):

- Foam:
 - Spectra highly recommends not using foam on the bottom or side of a back or seat substrate. Without foam, a cushion can sit straight/crisp against another cushion or whatever it is sitting on
 - Recommended thickness for seat/back cushions is no more than 3” thick upholstered foam. If foam is thicker than 3”, seat or back will not look aesthetically pleasing and will wear out much faster over time. If a design/section spec is shown with foam thicker than 3”, it should be fabricated with a dimensional/wedge substrate instead of a flat substrate. This can be done by either Spectra or the substrate fabricator if by others.
- Spring Seating:
 - If able to specify, Spectra Seating highly recommends Coil springs rather than S-Springs. Utilizing S-springs are much more labor intensive which will also impact size restrictions to the section design,
 - S-Springs require the depth of the seat to be at least 19” and 6” high to include the size of the springs with a minimum of 2” foam over the springs

Design Notes--Panels

Panels:

- Tack Panels – should generally use Micore and the largest size is:
120” L x 48” W
- Ceiling panels – recommended substrate is MDF
- Fabric wrapped panels are normally wrapped around edges and glued 1” onto the backside of the substrate (some applications require stapling)
- Foam:
 - We highly recommend not using foam as certain Fire Departments have requested panels with foam to be ASTM-E84 tested as a full assembly.
 - If foam is required, we recommend using ¼” Code Red foam which is ASTM-E84 compliant
 - If using foam, the corners will not be as crisp as without using foam
 - We do not use foam on the sides or bottom of the panel

Frequently Asked Questions

FAQs:

- Can I give you my shop drawings for review and input? – *Yes and this can offer an upstream opportunity to spot potential upholstery issues.*
- Do you use TB CA 117-2013 compliant materials? – *The short answer is that all upholstery foams are, fabrics may or may not be based on selection, and any other specialty materials will need to be addressed based on specs...we can also offer a highly combustion resistant version as needed but which may be an alternative added cost.*
- If I am providing substrates, how much should I deduct from the substrate dimensions to make sure the fabricated product is correctly sized? – *1/8" from each side (1/4" overall) is typical but if there is any question or a unique situation, it is best to check.*
- When fabricating substrates should I have foam overhang the outer edges of the substrates? – *If foam overhangs/exceeds the outer edge of a substrate, the upholstery will not be crisp and the material will tend to want to wrinkle. It is even better to have a hard l-shape return to ensure a taut material fit.*
- If needed are you able to secure burn test results for fully fabricated seating or wall panel product for TB CA 133 or ASTM E84 testing? – *Yes. These are costly and time consuming so if needed, the process should be initiated immediately.*