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EC65-444 Laminated and Bonded Fabrics

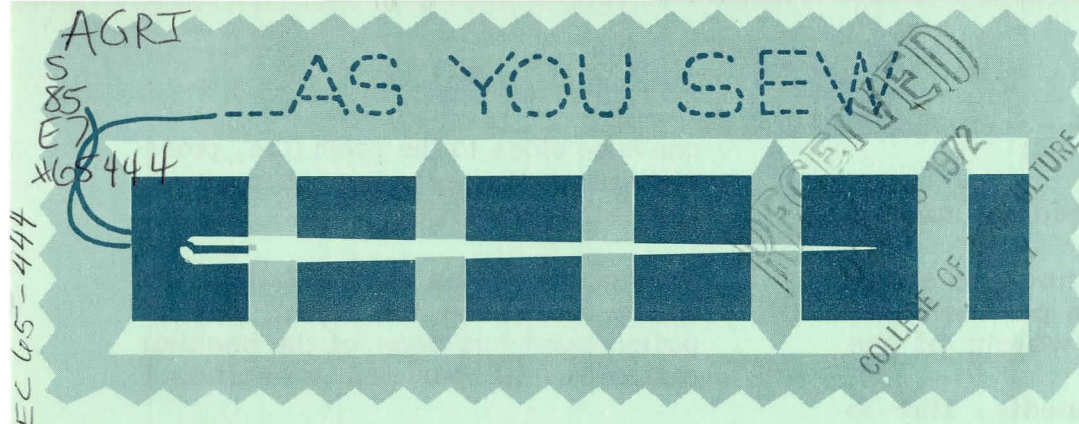
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E.C. 65-444

Laminated and Bonded Fabrics

By Gerda Petersen
Clothing Specialist

A laminated fabric is one that has a layer of a soft flexible foam such as polyurethane bonded to the back. There are two types of laminates: single and double. The single has fabric on only one side of the foam. The double has fabric on both sides of the foam. It is self-lined. The laminates are warm and lightweight because of the small foam cells that trap air and act as insulation.

Fabric-to-fabric bonding developed from the double laminate idea. In bonded fabrics the foam is used as an adhesive instead of an insulator. The foam disappears in the flame processing of the fabric.

Another method of making a bonded fabric is to eliminate the foam and substitute a wet adhesive. When this is heat-cured the two fabrics adhere to each other.

For example, a tricot lining may be bonded to a wool flannel outer fabric. Some of the terms used to describe these bonded fabrics are: double-faced, self-lined, back-lined.

LAMINATED FABRICS

Characteristics

1. They hold their shape well and are wrinkle resistant.
2. They will not drape, ease and press as do other fabrics since they are bonded.
3. If the grain is crooked it cannot be straightened.

Pattern Selection

1. Choose a simple pattern with few seams and details. Kimono, raglan, or dolman sleeves are preferable to set-in sleeves since the fabric doesn't ease well.

Laying & Cutting the Pattern

1. Place pattern on right side of fabric where grainline can be seen.
2. Lay pattern following lengthwise grain or rib (straight of material parallel to selvedge). Crosswise grain may not be straight but bonding generally prevents garment from losing its shape.
3. Cut single thicknesses. For pieces cut on fold, cut the first half, then turn the pattern over on the fold line and cut the other half.
4. On a jacket cut garment and facing in one piece to eliminate a seam (if possible).
5. Mark with tailor's tacks or tailor's chalk.

Construction Techniques

1. Hand baste and fit to avoid ripping stitching.

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2. Make a test seam using:
 - a. Medium to light machine tension and pressure.
 - b. Medium to long machine stitch (10 to 12 stitches per inch) depending on the weight of the fabric.
 - c. Sharp machine needle, fine to medium, to prevent snagging.
 - d. Thread suitable for the outer fabric.
 3. Slash darts to within 1/2" of point and press them open. Catchstitch cut edges to back of garment.
 4. Reinforce buttonholes with stripes of light weight fabric.
 5. Reduce bulk by using a lining fabric for facings and under collars. Understitch facing for a sharper edge. A braid might be used as a decorative finish on an edge to eliminate bulk.
 6. Seams usually need no edge finish since bonding prevents fraying.
 7. Use a tailor's hem and hand stitch double laminate through lining only. Single laminates will need to be stitched through entire fabric. Use a loose hand stitch.
- one edge close to the seam line, press and stitch other edge over it to give a flat-fell appearance.
5. Staggered seams reduce bulk. On heavy fabric the two layers may be pulled apart and some of the backing cut away. (Experiment on scraps.)
 6. Cushion thickness of hems on coats by using a bias interfacing that extends above the hem. Handstitch interfacing to the body of the coat, sewing through entire fabric with a loose stitch. Handstitch edge of hem to interfacing.

Pressing

1. Use steam or dry iron at heat setting suitable for outer fabric.
2. Use a press cloth, don't press directly on right side.
3. Place paper under seam allowances so iron will glide smoothly over the foam.
4. Don't attempt to press foam side.
5. Seam allowance may return to unpressed position unless tacked in place with hand stitches.

BONDED FABRICS

Additional Construction Techniques for Single Laminates.

1. When stitching with foam sides out, place tissue paper between fabric and machine on top and bottom to prevent sticking. Or, stitch with straight seam or bias tape over top of seam and with paper underneath. Tape reinforces seams.
2. To feed laminated fabric into the machine turn balance wheel by hand for the first five or six stitches.
3. Don't stitch over pins.
4. Press seams open and top stitch close to seam line if suitable to design. (It is impossible to press some seams flat.) Another possibility is to trim

Continuing new developments in bonded fabrics will result in a great variety. They will range from very lightweight to heavy reversible fabrics. Lacy weaves and knits will be given body and durability through bonding. Some fabrics will be more comfortable to wear because of a bonded lining.

Bonded fabrics have a drape and flexibility that isn't generally achieved in laminated fabrics. Many techniques for handling laminated fabrics will also apply to bonded fabrics. It is important to look for fabrics bonded straight on grain, since they cannot be straightened.

Since there is so much variation in bonded fabrics it is important to do some test stitching on each fabric. Check stitch length, tension and pressure as you test.