APPLICATION OF EKOBOND CEMENT

Fabric to Metal - EkoBond Cement (E610) is used in a different manner than most aircraft cements. Apply EkoBond Cement (E610) to the surface where the fabric will be attached. Let the cement tack up (tacky to the touch, approximately 5 minutes, depending on temperature and humidity). Apply the fabric to the cemented area. Using your hand, remove excess wrinkles, then with firm pressure rub fabric onto cemented areas. This will gently hold fabric in place. When fabric placement is acceptable, use a Close Quarter Iron set at 275 to 300°F and make a single pass over the cemented area, using firm pressure. This will heat activate the glue and hold fabric in place. You will see a glue bond of about 1/16" to 1/8" wide where the iron heat activated the glue. Brush additional glue down through the fabric to the cemented area and wipe away excess with a blue paper shop towel while at the same time smoothing the fabric down. The cemented area should show an even color indicating a complete bond to the substrate. Drying time will depend on temperature and humidity. When installing inspection rings or reinforcing patches, use EkoBond Cement like contact cement: apply to both surfaces, allow to become tacky, and then press the surfaces together.

NOTE: Be sure to wipe away excess cement immediately, while still wet.

Fabric to Wood - When applying fabric over plywood surfaces apply the EkoBond Cement (E610) to the plywood and allow to tack up. Apply fabric to cemented area, brush additional EkoBond Cement (E610) down through the fabric and wipe away excess with a blue paper shop towel while at the same time smoothing the fabric down.

NOTE: Be sure to wipe away excess cement immediately, while still wet.

NOTE: EkoBond Cement is thermal active, meaning that if necessary you can insure a good bond or reattach cemented surfaces by applying heat to the area. See: Calibrating Your Electric Irons.

Fabric to Fabric – Fabric to fabric is used on the second surface to be covered. Example: The fabric to steel would be the first surface to be covered. This should be the bottom (horizontal control surface, elevators, wings, fuselage, etc).

After the first surface is in place and shrunk to its first shrink of 250°F the second surface is installed. Mark first surface with pencil line along the perimeter where the second surface will glue to. Apply EkoBond Cement (E610) up to this line. Let dry. Place fabric in position. This piece should be cut oversize approximately 4". Place the fabric in position on the part and using firm pressure rub the fabric into the dried glue to lightly attach fabric in place. When satisfied with the lay of the fabric use a 275 to 300°F iron to make a single stroke over the perimeter of the glued surface to hold fabric in place. (Refer to Page 6 Section 17 figure 17-9 for example photo) Now gently iron the fabric down to the surface of the pre glued panel to the edge of the pencil line, using the iron to shrink the fabric to a smooth surface around any corners. When the fabric is wrinkle free and smooth to the pencil line draw a new pencil line on this lay of fabric directly over the previous pencil line. Now pull the pencil marked lay of fabric loose back to the previously bonded area where the single pass was made with the iron around the perimeter. Use pinking shears to cut off excess fabric following pencil mark. After cutting, lightly re-iron in place to remove any wrinkles, being careful to iron only enough to hold fabric in place, but not to shrink fabric (225°F-250°F). Brush EkoBond Cement (E610) under the fabric joint and then down through fabric into previously applied EkoBond Cement on first surface. Normally, glue about 12", wipe excess, and glue additional 12", and so on.

CEMENTED SEAMS

When EkoBond Cement is dry, shrink to 250°F. If additional surfaces are required (fuselage sides and top) repeat above steps. Once all surfaces are installed it is time to shrink the fabric.

For cemented seams, brush a coat of EkoBond cement (E610) on bottom piece of fabric. When dry place top piece of fabric in desired position, gently press both pieces together to hold in place and with a Close Quarter Iron set at 250°F make a single pass over the overlap seam of fabric to lock in place. (An area of approximately 1/8" wide is sufficient to lock fabric in place) Brush EkoBond cement (E610) down through top piece into glue previously applied to bottom piece. Glue approximately 12" at a time, wiping off excess glue with a blue paper shop towel. Continue until seam is totally glued.

Cemented overlap seams will have a glue width of at least 1". This generally applies to areas such as glued seams on stabilizers, elevators, rudders, flaps, ailerons and longerons. Sewn seams are not necessary. Glued seams over open areas such as at transition of vertical fin to top of fuselage skin are permissible without a sewed seam. A minimum overlap seam of 1" is required with a minimum width of 2" finish tape centered over the edge of glued seam.

Black – substrate
Blue – EkoBond
Lt Red - First Layer Fabric
Dk Red – Second Layer Fabric

Cemented overlap seams at wing leading edge shall be a minimum of 3". This seam shall then be covered with a minimum of 4" wide finish tape, centered on outer edge of overlap seam. This over lap joint is acceptable over bare leading edge or over felt covered leading edge. Trailing edge shall be glued with a minimum of 2" glued seam. This seam shall be covered with a 3" or wider finish tape.

If leading edge is padded with felt the following procedure is suggested. Light weight felt that will compress to 1/32" thickness is recommended. Bulk bolts of this felt are available at most yardage outlets in 36" widths. This material when split in half lengthwise will be wide enough to cover most leading edges. To apply, spray a light coat of 3M77™ or equivalent spray adhesive to leading edge. While still damp, apply felt to leading edge and smooth out all wrinkles. Felt should now be coated with 2 brush coats of EkoBond cement to fill weave of felt. When EkoBond is dry, leading edge is ready for fabric.