



**EkoBond** is a water-based contact cement type adhesive. It is used primarily for the following;

- Attaching fabric to the structure
- Making fabric-to-fabric glue joints
- Gluing the finishing tapes down
- Gluing grommets and inspection rings to the fabric
- Sealing the weave of the fabric before trimming or cutting to prevent frays

EkoBond is typically used full strength from the bottle or may be diluted 5% with distilled water to increase penetration of the weave and to increase working time. Do not let EkoBond freeze. Keep the lid on the bottle to avoid skimming in the bottle. Keep your brush in the cup of glue you are working from and leave a damp paper towel over the cup to prevent skimming while in use.

### **Laying out your fabric**

Orientate your structure to follow the grain of the fabric. It does not matter if it is parallel to the warp or fill of the fabric just make sure not to lay your structure across the bias of the fabric at a 45 deg angle. Also make sure you have about 4" of spoilage beyond the line you intend to trim the fabric at because you need to have something to hold onto when working the fabric around the structure. Do not start with a long 45 or 50 yard roll and begin cutting out all the small pieces of fabric for the control surfaces. Start by cutting out the large pieces first so that you can use the scrap to cover the smaller parts of the aircraft.

### **Attaching fabric to structure and making fabric to fabric glue joints**

A 1" fabric to fabric glue joint is approved. No sewn seams are required. A 1" fabric to fabric glue joint can be used over non structural components and in open bays between ribs or stringers. A minimum of a 2" finishing tape must be applied over a fabric to fabric glue joint. Wing leading edges must have a 3" fabric to fabric glue joint and be covered with a 4" finishing tape. Wing trailing edge glue joints must be a 2" fabric to fabric glue joint covered with a 3" finishing tape. ALWAYS go over a dry glue joint with an iron at 250-275 deg F. using medium pressure to ensure there are no voids in the glue joint and to smooth out the edges of the fabric and finishing tapes.

The surface you are applying the EkoBond to must be clean, dry, and contaminate free. Steel should be primed and painted. You can glue directly to bare Aluminum, Composite, and Wood surfaces. Gluing fabric onto sealed wood surfaces is acceptable. No need to remove any varnish or wood sealer. If the fabric glue joint terminates on the structure and will not have an overlapping fabric to fabric glue joint ensure that the surface you are gluing to is very clean. You may choose to scuff sand with Scotch-Brite or 320 grit sand paper to improve adhesion. Wipe the surface with Isopropyl alcohol prior to bushing on the bed layer of glue to ensure there are no oils, wax, or greases and to remove any surface residue.

When applying fabric to structure or making a fabric to fabric glue joint like you would when using the blanket method to cover a component a bed layer of EkoBond is brushed on where you intend to attach the fabric and allowed to dry. **ATTENTION !!** Ekobond has no wet adhesion.



Make sure the bed layer film thickness is sufficient **\*(.006-.010”)** so that when *dry* you can press the fabric into the bed layer of glue by applying pressure rubbing by hand or with a warm iron at 200-225 deg F. forcing the fibers of the weave down into the bed layer of EkoBond to temporarily hold the fabric in place. You are still able to peel up and re-position the fabric as needed to get a nice smooth lay out over your structure. The bed layer of EkoBond is a dry tacky surface that you are using to temporarily hold the fabric to the structure by pressing the fibers of the fabric into the bed layer of glue. Once you are satisfied with how the fabric is laid out use the iron at about 225-275 deg F and using *pressure* push the weave of the fabric down into the bed layer of glue. The heat from the iron softens up the EkoBond allowing you to push the fibers of the fabric deeper into the bed layer of glue. You should see a slight darkening or “glue line” where you have heat bonded the fabric to the bed layer with the iron. That “glue line” is a visual sign of the bed layer of glue penetrating the weave of the fabric. Even at this time you can peel up the fabric and re-position it if needed.

Now that the fabric has been heat clamped to the structure by ironing it into the bed layer of EkoBond you are ready to complete the glue joint. First mark where you intend to cut the excess fabric off using a pencil. Then brush/push EkoBond down through the weave of the fabric over the bed layer of glue and also out past the pencil line where you intend to trim the fabric. Only work about 12-18” at a time making sure to come back with a lint free paper towel to wipe off the excess EkoBond from the surface of the fabric. *Wipe the surface clean - Do not leave any EkoBond on the surface of the fabric.* If the surface is shiny you did not wipe the surface clean and you will have a rubbery layer of dry EkoBond on the surface and it will be visible through the top coat of paint. You should see a uniform blue color all the way through the weave of the fabric. Let dry, then use straight scissors to trim the excess fabric off cutting along the pencil line. Use the Iron to stick back down the trimmed edge into the bed layer of glue.

### **Finishing tapes and patches “doilies”**

You may choose to dilute EkoBond 5% with distilled water. Applying finishing tapes is done with a “wet on wet” application of EkoBond. Brush on a 4-6” long wet bed layer of glue making sure the width exceeds the width of your finishing tape. It is very important that the pinked edge of the tape is fully saturated with EkoBond. Quickly lay your finishing tape into the wet glue and WITHOUT re-wetting your brush push the wet glue up through the weave of the finishing tape and make sure to fully wet out the pinked edge. If needed re-wet your brush and make sure you have an even blue color out past the pinked edge. Work quickly so that you can wipe off the excess glue with the lint free paper towel before the EkoBond begins to dry. Do not worry about where the finishing tape tents up over rib stitching, screw heads, pop-rivets, or other finishing tapes. When dry you can iron down the tape nice and smooth. Remember that EkoBond had NO wet adhesion. After tacking down the first 4-6” of a finishing tape you can then come back and using the same wet on wet application work about 18” of the finishing tape at a time. Lift up the tape, brush out a wet layer of EkoBond, lay the tape down into the wet layer and WITHOUT re-wetting your brush push the wet glue up through the finishing tape fully saturating the weave and making sure to fully wet out the pinked edge. If needed re-wet your brush but try to avoid wasting excess glue by wiping off half of what you just brushed on. Then QUICKLY before the EkoBond begins to dry use the lint free paper towel to remove the excess EkoBond from the surface.



***When wiping EkoBond from the surface of the fabric make sure not to leave any excess EkoBond on the surface of the fabric. It is too rubbery to sand and will not be hidden by the additional coatings you will be applying.***

The lint free paper towel should be used like a sponge not a squeegee. You want to “pick up” the excess not “push it around” Fold and wipe, fold and wipe, fold and wipe, throw away. Once you have EkoBond on the surface of the paper towel it can no longer “pick up” the excess EkoBond and is useless. Experience will teach you just how much EkoBond is needed to get the job done. If you find your self wiping off 50% of what you brush on you need to use less glue. Once the weave of the fabric has been sealed with EkoBond trying to push more through will not work. Adding more EkoBond will not soften up what is already there. ***Once Dry EkoBond can not be dissolved back into it’s initial wet state with solvents.*** It must be removed by shearing it from the surface using an eraser, your thumb, or a wet terry cloth type towel.

### **Using EkoBond as a contact cement**

EkoBond can be used as a contact cement to attach inspection grommets or seaplane grommets and fabric reinforcements to the surface of the fabric. Lay your inspection grommet on the surface. Trace the outline of the grommet. Clean and scuff the mating surface of the grommet. Apply a layer of glue on the fabric staying inside the pencil lines and let tack up. Also apply a layer on the contact surface of the grommet and let tack up. Before both surfaces have fully dried stick them together and apply pressure. Remember that EkoBond has no wet adhesion. You may choose to run the iron over the top of the grommet using pressure and heat to compress the glue joint once the glue has dried.

### **Pre-Coating fabric with EkoBond before cutting to prevent fraying of the weave**

When cutting out patches or “doilies” or trimming fabric around protrusions such as gear fittings, lifting handles, and hinges you can prevent the fabric from fraying by first marking out where you intend to cut with a pencil. Then brush a light coat of EkoBond into the weave of the fabric and wipe off the excess. Let dry and cut long the pencil line. When the weave has been saturated and locked together with EkoBond it will significantly reduce fraying.

### **Final Ironing of glue joints**

Always let the glue dry before running an iron over the surface and along the pinked edges. When the glue has dried you can compress the layers filling any voids and ironing out any air bubbles. Use 225-275 deg F. and medium pressure when ironing.

#### **\*NOTE\***

**Recommended dry film thickness for bed layer of glue is about .006-.010” Medium weight fabric is roughly .006” thick. The dry bed layer of glue should be about as thick as the fabric it’s self. You should see a slightly darkened area or “glue line” when heat forming and clamping the fabric into the dry bed layer of glue with the iron using heat and pressure to force the weave of the fabric into the bed layer of glue.**