

The Covering Process

After acid treatments, the next step is to apply an epoxy primer. You have a choice of three colors of **Randolph** Epoxy primers; all mix and work identically. Your three choices are: **W-2248 Epibond** (off white); **G-2404 Epoxy Primer** (yellow); and **B-6433 Rand-O-Plate** (dark green).

Unless there is a good reason to use yellow or green epoxy primer, **Epibond** off-white is the easiest to cover with topcoat paint and is therefore recommended on most aluminum or composite surfaces. For application discussion we will use **Epibond** off-white, but the same mixing and spraying procedures apply to yellow **G-2404** and green **B-6433**.

Epibond has three parts:

1. **W-2248 Epibond Primer**
2. **W-2249 Epoxy Mixing Liquid (catalyst)**
3. **G-4201 Ranthane Primer Reducer**

Mix the primer mixing liquid together in a 1:1 ratio. Let this mixture stand 20 minutes to give the catalyst time to react. Thin as necessary to desired spray viscosity with **Ranthane Primer Reducer**. Spray light coats. When properly applied the white primer should be only about one-half mil thick and should be translucent. You should be able to see the aluminum through the primer if you apply it in light coats.

Attaching the Fabric

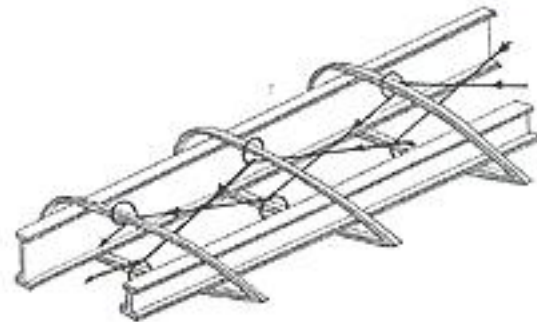
At this point you should have:

- All structures to be re-covered repaired (if necessary), stripped, cleaned, and primed.
- All necessary tools and materials on hand.
- A suitable work area prepared and ready.

Don't wait until you're in the middle of the cementing process to discover that you don't have something you need to finish the job. Check your lists.

Inter-Rib Bracing

This bracing keeps the ribs straight up and down when the fabric is heat shrunk over them. It is nothing more than twill tape to provide stability for the ribs while covering. As the drawing shows, the inter-rib bracing



tape is looped around the top capstrip of the first rib halfway between the front and rear spars. Then it loops the bottom capstrip of the next rib, and then back to the top capstrip of the next rib, and so on until the whole wing is braced. When complete, the inter-rib brace looks like a series of "Xs" in each rib bay. It is important to only loop the inter-rib bracing without tying it to each rib, except at the very ends. If you tie it, the ribs won't be able to move and readjust their positions during the shrinking process. This bracing is not removed.

Anti-Chafe Tape

Any sharp edge or other structural feature that might cut or poke through the fabric should be covered with cloth anti-chafe tape. It is self adhesive and easy to use.

The Basic Cementing Steps

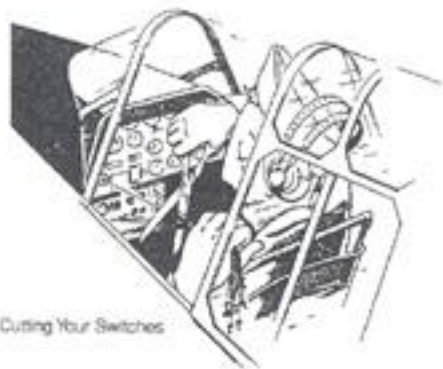
It is important that you use only **New Super Seam** cement. **New Super Seam** is used right out of the can with no thinning. Use a soup can for the **New Super Seam** with a 1" wide gluing brush. If the **New Super Seam** gets thick in the soup can, add pure MEK to get it back to the original consistency. If you spill or have a messy area with excess ooze or drips, clean it up with MEK. MEK will clean up even dried **New Super Seam**.

The Covering Process

New Super Seam cement dries fast... *really* fast. In hot weather it can dry in five minutes. It normally dries in about 15 to 20 minutes. Because **New Super Seam** dries so fast, you have to brush it on a little at a time, then stop and press the fabric into it while it's still wet. Normally, you only cement about 12" to 18" at a time to keep it from drying. The trick is to keep the cement liquid when the fabric is placed into it. If it dries, no good... you must do it again.

The best cement bond is accomplished by brushing a strip of wet **New Super Seam** onto the area where fabric is to be attached, then immediately laying the fabric wrinkle free into the cement. Force the cement up through the fabric until it wets out the surface. A plastic squeegee works best for this and has the advantage of leaving a smooth, lump-free area of cemented fabric. If you use your fingers, make sure to use barrier cream or latex gloves. Whatever you use, make sure the cement penetrates up through the weave of the fabric. The very best cement bond for **Ceconite** comes when the fabric is encapsulated in cement, and the best way to do this is by forcing the cement up through the weave of the fabric when installing.

If you make a mistake, you can uncement any seam. Simply wet the seam with MEK on a rag, pull the seam apart, and immediately re-cement it correctly with fresh **New Super Seam**. You can't make a cementing mistake that MEK won't fix.



Cutting Your Switches

Cemented Seams

Cemented seams are approved in the **Ceconite** STC. Just follow these basic rules.

- **All seams except those on the leading and trailing edges** of wings must have **AT LEAST** a 1" overlap.

- **Wing leading edge** seams must overlap **AT LEAST** 4".



- **Wing trailing edge** seams must have **AT LEAST** a 3" overlap.

- **Cemented seams on the fuselage** must occur over a longeron, not a stringer.

Cemented seams generally cannot be positioned over non-structural areas, such as an open bay between wing ribs. All cemented seams must occur over structural parts.

If a seam absolutely must occur over a non-structural part it must be a sewn seam, not cemented.

A **blanket** is defined as a large flat piece of fabric that lies over an airframe component. An example would be a blanket that covers the bottom of your upside-down fuselage and wraps around the sides. A blanket can be one uncut piece, or it can be several pieces sewn together. **Do not attempt to create a blanket by cementing pieces together and then installing them on the airframe.** The uneven heating of the cement seam will break the bond.

A **pre-sewn envelope** is kind of like a big sock that you pull over a wing, fuselage, or tail feathers. Envelopes are purchased ready to install and are enormous time savers.