

## TRA-BOND F123

### COLOR KEYED HIGH TEMPERATURE EPOXY ADHESIVE

TRA-BOND F123 is a fast cure, low viscosity, two-component epoxy formulation that signals both proper mixing and curing when bonding fiber optic bundles, potting glass fibers, and/or terminating single or multi-channel fiber optic connectors. Although this unique three-step color-change formulation's unmixed components are light yellow, it turns light green on mixing, and changes again to a deep reddish-amber after the REQUIRED 100°C HIGH TEMPERATURE CURE. It exhibits good wicking, and develops strong, tough, mechanically stable bonds to a wide variety of fiber optic and optical materials that includes most metals, ceramics, glass and many plastics. TRA-BOND F123 has good impact and thermal shock resistance, and yields excellent low stress, pot-and-polish connections which do not piston during cycle tests. It is also resistant to water and weathering, vapors and gases, most petroleum products, and an extended range of organic and inorganic environments.

PROPERTY	TYPICAL VALUES
Color, mixed	Clear, green/blue
Color, unmixed	Clear, light yellow
Color, cured	Clear, reddish-brown
Specific gravity, mixed	1.200
Index of refraction	1.56
Viscosity, cps, mixed (after mixing) @ 25°C	4,000
Operating temperature range, °C	-60 to 175
Hardness, Shore D	87
Mix ratio, parts by weight, Resin/Hardener	100/10
Lap shear, alum to alum, psi	2,900
Glass transition (T <sub>g</sub> ), °C, ultimate	120.00
Spectral transmittance % (6000-9000 Å)	93.00
Dielectric strength, volts/mil	400
Reactive solids contents, %	100

**POT LIFE** 4 hours

**CURE SCHEDULE**

5 minutes at 100°C

Shorter cures at higher temperatures (e.g. 2 minutes at 120°C, or 1 minute at 150°C) are also possible. An additional post cure of 30 minutes at 150°C is recommended when application temperatures higher than 150°C are anticipated. For masses over 1/4 gram, allow material to gel for 4 hours at 25°C followed by 100°C for 5 minutes.

**APPLICATION DIRECTIONS**

- (1) Carefully clean and dry all surfaces to be bonded.
- (2) Remove clamp and thoroughly mix the TRA-BOND F123 epoxy adhesive system components in the handy BIPAX mixing-dispenser package until color is uniform throughout.
- (3) Apply this completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds -- however maintain contact until adhesive is completely cured.

**AVAILABILITY**

Please contact TRA-CON's technical service department at 800-TRA-CON1 for packaging options for this material that will best suit your process.

**EXPIRATION DATE**

TRA-CON resin products are marked with an expiration date at the time of manufacture which is similar to the the dating system used for most perishable materials such as foodstuffs, photographic films, pharmaceuticals and most reactive products. This date is marked "Use Before" which indicates that the product will yield its best properties when mixed and cured before the date shown. The expiration date should be monitored to ensure that inventory levels are replenished in adequate time to avoid unnecessary interruptions in the manufacturing process.

**STORAGE AND HANDLING CONDITION**

The expiration date is based upon dry storage conditions at or below 80°F (27°C) in the original, sealed and unopened containers for BIPAX, TRA-PAX and bulk packaged materials. The expiration date for pre-mixed and frozen materials is based upon dry storage conditions at or below the temperature indicated on each package. Contents may separate during storage. Resin or hardener in bulk containers (e.g. quarts, gallons) should be thoroughly mixed prior to combining them to obtain all the benefits of the properties designed into the formulation.

Some ingredients in this formulation provided in BIPAX, TRA-PAX and bulk packaging may crystallize when subjected to low temperature storage. Merely returning the product back to room temperature will not always redissolve the crystals and a gentle warming cycle of 125°F for 30 minutes prior to mixing the resin and hardener components may be necessary to return the product to its best condition. Crystallized epoxy components do not react as well as liquid components and should be redissolved prior to use for best results.

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**WARNING: THIS MATERIAL IS SOLD FOR INDUSTRIAL USE ONLY**

Uncured epoxy adhesives - consisting of resin and hardener components - may cause dermatitis, skin sensitization or other allergic responses. Prevent all contact with skin and eyes. If contact occurs, flush immediately with plenty of water (get prompt medical attention for eyes). Keep away from heat and open flame. KEEP OUT OF REACH OF CHILDREN. Immediately clean up any spills that may occur.

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**The properties given are TYPICAL VALUES and are not intended for use in preparing specifications.  
Users should make their own tests to determine the suitability of this product for their own purposes.**