

# High Temperature Fiber Optic Assembly Epoxy Adhesive

Technical Product Bulletin

## PRODUCT DESCRIPTION:

AA-BOND F123BK is a 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.

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.

AA-BOND F123BK 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. 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.

## PRODUCT CHARACTERISTICS:

<b>Color</b>	Black
<b>Components</b>	2 components
<b>Mix Ratio, by weight</b>	100:10 / Resin:Hardener
<b>Benefits</b>	Low viscosity Fast Cure Good impact and thermal shock resistant Color coded
<b>Cure Type</b>	Room temperature or Heat Cure
<b>Operating Temperature</b>	-60 to 175 °C
<b>Typical Applications</b>	Fiber optic assembly, multimode and single mode connectors, small potting and sealing applications.

## UNCURED PROPERTIES:

<b>Viscosity @ 25 °C, cps</b>	4000 cP @Temperature 25.0 °C, 77.0 °F
<b>Specific Gravity</b>	1.19
<b>Pot Life</b>	4 hours
<b>Shelf life</b>	1 year

## CURE SCHEDULE:

<b>24 hours</b>	@ 25°C
<b>5 minutes</b>	@ 100°C

## CURED PROPERTIES:

<b>Glass Transition (T<sub>g</sub>), ultimate, °C</b>	120
<b>Hardness, Shore D</b>	86
<b>Refractive Index</b>	1.55
<b>Adhesive Bond Strength, alum to alum, psi</b>	2900
<b>CTE, linear</b>	35.1 μin/in-°F
	113 μin/in-°F
<b>Transmission, Visible</b>	93%
<b>Thixotropic Index</b>	1.0

## ELECTRICAL PROPERTIES:

<b>Dielectric Strength</b>	400 kV/in
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## GENERAL INFORMATION:

For safe handling information on this product, consult the Material Safety Data Sheet, (MSDS).

## HOW TO USE:

- Carefully clean and dry all surfaces to be bonded.
- Apply AA-BOND F123BK 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.
- Some separation of components is common during shipping and storage. For this reason, it is recommended that the contents of the shipping container be thoroughly mixed prior to use.
- Some ingredients in this formulation provided may crystallize when subjected to low temperature storage. A gentle warming cycle of 52°C for 30 minutes prior to mixing components may be necessary. Crystallized epoxy components do not react as well as liquid components and should be re-dissolved prior to use for best results.

## AVAILABILITY:

This epoxy can be supplied in many different packages.

## Atom Adhesives

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