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AA-BOND F123

High Temperature Fiber Optic Assembly Epoxy Adhesive

Technical Product Bulletin

PRODUCT DESCRIPTION:

AA-BOND F123 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.
AA-BOND F123 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 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. Shorter cures at higher temperatures. An additional post-cure of 30 minutes at 150°C is recommended when application temperatures higher than 150°C are anticipated.

PRODUCT PROPERTIES:

Color	Part A (Resin): Clear Part B (Hardener): Clear to light yellow Mixed: Clear
Components	2 components - requires mixing
Cure Type	Room Temperature or Heat cure
Benefits	• Low viscosity • Low stress connectors • Good impact and thermal shock resistant
Mix Ratio by weight	100:10 Resin to Hardener
Substrates	Most metals, Ceramics, Glass and plastics Etc.
Operating Temperature	–40°C (-40°F) to +175°C (347°F)
Typical Applications	Fiber optic assembly, multimode and single mode connectors, small potting and sealing glass fiber optic connectors applications

UNCURED PROPERTIES:

Mixed Viscosity @ 25 °C cps	4000 ±500
Specific Gravity gm/cc	Mixed: 1.19
Reactive solids contents, %	100
Pot Life	3hours
Shelf life	1 year

CURE SCHEDULE:

24 hours	25°C (77°F)
5 minutes	100°C (212°F)

CURED PROPERTIES:

Hardness, Shore D	86
Refractive Index	1.55
Transmission, Visible %	93
Lap Shear Strength alum to alum, PSI	2900 (24 hrs @ 25°C)
Dielectric strength, Kv/in	400

THERMAL PROPERTIES:

CTE, linear	35.1 µin/in-°F @Temperature 68.0 °F
Glass Transition Temperature (Tg)	120°C (248 °F)

GENERAL INFORMATION:

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

HOW TO USE:

1. Carefully clean and dry all surfaces to be bonded.
2. Apply AA-BOND F123 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.
3. 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.
4. 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.
5. Allow the product to cure according to the cure schedule.

AVAILABILITY:

This epoxy can be supplied in many different packages.

Atom Adhesives

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