TECHNICAL PRODUCT BULLETIN

AA-BOND F113 OPTICALLY CLEAR EPOXY ADHESIVE

PRODUCT DESCRIPTION

AA-BOND F113 is an optically clear, low-viscosity, high-impact epoxy adhesive designed for bonding and small-volume potting of plastic or glass optical fibers, lenses, prisms, LED displays, and other optical components. It offers 97% optical transmittance across 320–900 nm, ensuring excellent clarity for optical applications.

This two-part adhesive provides excellent wetting, a good pot life (60 minutes), and improved impact strength. It cures at room temperature or with heat, forming strong bonds to glass, glass fibers, ceramics, many metals, and most rigid plastics, with resistance to thermal shock, weather, water, gases, petroleum products, mild acids, and alkalis.

Ideal for laminating, sealing, and bonding in fiber optic assemblies, LED displays, and optical systems, AA-BOND F113 is available in various packaging options.

PRODUCT PROPERTIES

Color	Part A (Resin): Clear
Components	2 component - requires mixing
Cure Type	Room Temperature or Heat Cure
Mix Ratio by Weight	100:30 Resin to Hardener
Operating Temperature	-40°C (-40°F) to +100°C (212°F)
Substrates	Glass, glass fibers, ceramics, metals, rigid plastics
Typical Applications	Fiber optic assembly, lenses, prisms, LED displays, optical bonding

UNCURED PROPERTIES

Property	Value
Mixed Viscosity @ 25°C, cps	175 ± 30
Specific Gravity, gm/cc	Mixed: 1.13
Reactive Solids Contents, %	100
Pot Life	60 minutes

CURE SCHEDULE

Time	Temperature
24 Hours	25°C (77°F)
1-2 Hours	65°C (149°F)

CURED PROPERTIES

Property	Value
Refractive Index	1.57 @ 589 nm
Optical Transmittance	98% (320–900 nm)
Hardness, Shore D	78
Volume Resistivity, ohm·cm	9.0 E+8
Lap Shear Strength to Aluminum, PSI	4000 (2 hrs @ 65°C)
Dielectric Strength, Kv/in	430

THERMAL PROPERTIES

Property	Value
CTE, Linear	30.6 µin/in-°F @ 68.0°F
Glass Transition Temperature (Tg), Ultimate	45°C (113°F)

HOW TO USE

1. Carefully clean and dry all surfaces to be bonded.

2. Apply AA-BOND F113 completely mixed adhesive to the prepared surfaces, and gently press these surfaces together. Contact pressure is adequate for strong, reliable bonds; maintain contact until adhesive is completely cured.

3. Thoroughly mix the contents of the shipping container prior to use, as separation of components may occur during shipping and storage.

4. If ingredients crystallize due to low temperature storage, warm to 52°C for 30 minutes before mixing to re-dissolve for best results.

5. Cure according to the schedule: 24 hours at 25°C or 1-2 hours at 65°C.

GENERAL INFORMATION

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

Atom Adhesives
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