

PRODUCT DESCRIPTION:

AA-BOND 2153 is a thixotropic (smooth paste) thermal conductive epoxy system that passes the NASA Outgassing Specification. It is used for staking transistors, diodes, resistors, integrated circuits and other heat-sensitive components to printed circuit boards.

AA-BOND 2153 is two parts adhesive develops strong, durable, high impact bonds at room temperature which improve heat transfer while maintaining electrical insulation.

AA-BOND 2153 bonds to itself and to metals, silica, alumina, others ceramics, glass, plastics and many other materials.

AA-BOND 2153 provides excellent resistance to salt solutions, mild acids and alkalis, and many other chemicals.

GENERAL PROPERTIES:

Appearance	Dark grey
Cure Type	Heat cure or room temperature
Benefits	<ul style="list-style-type: none"> • Strong • Durable • High impact bonds at room temperature
Mix Ratio by weight	100:7 / Resin: Hardener
Outgassing, NASA	Passes
Typical Application	Staking transistors, diodes, resistors, integrated circuits and other heat-sensitive components to printed circuit boards

UNCURED PROPERTIES:

Specific Gravity, mixed	2.44
Reactive solids contents, %	100
Pot Life	30 minutes
Shelf life	1 Year

THERMAL PROPERTIES:

CTE, linear	10.0 $\mu\text{in/in-}^\circ\text{F}$ @Temperature 68.0 $^\circ\text{F}$
Thermal Conductivity	6.94 BTU-in/hr-ft ² - $^\circ\text{F}$ 1.00 W/m-K
Glass transition temperature (Tg), $^\circ\text{C}$	110 $^\circ\text{C}$, 230 $^\circ\text{F}$
Operating Temperature	-70 to 110 $^\circ\text{C}$ / -94 to 230 $^\circ\text{F}$

CURED PROPERTIES:

Hardness, Shore D	90
Dielectric strength, volts/mil	410

CURE SCHEDULE:

2 – 4 Hours	@ 65 $^\circ\text{C}$
24 Hours	@ 25 $^\circ\text{C}$

ELECTRICAL PROPERTIES:

Volume Resistivity	5.50e+15 ohm-cm 4.00e+13 ohm-cm @Temperature 212 $^\circ\text{F}$
Dielectric Constant	6.0 @Frequency 1000 Hz
Dielectric Strength	410 kV/in
Dissipation Factor	0.010 @Frequency 1000 Hz

GENERAL INFORMATION:

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

HOW TO USE:

1. Carefully clean and dry all surfaces to be bonded.
2. Apply AA-BOND 2153 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 $^\circ\text{C}$ 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 result.

AVAILABILITY:

This epoxy can be supplied in many different packages.

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