



# **Nickel Filled Electrically Conductive Epoxy**

**Technical Product Bulletin** 

#### **PRODUCT DESCRIPTION:**

AA-DUCT NO2 is a single component, heat curing, conductive epoxy polymer that was designed for ease in handling. This high performance conductive polymer cures quickly at elevated temperatures making it ideally suited for rapid Processing and assembly.

AA-DUCT NO2 passes NASA's outgassing testing (ASTM E-595) and is listed in NASA's Outgassing Data for Selecting Spacecraft Materials list.

AA-DUCT NO2 offers excellent mechanical, electrical, and physical properties at continuous operating Temperatures up To 175°C. This versatile Nickel conductive adhesive can be used for chip bonding in Micro and electronic hybrid circuit Fabrication. This unique conductive polymer also exhibits outstanding adhesion to a wide variety of substrates with good hot strength at intermittent temperatures up to 325°C.

AA-DUCT NO2 has also been used in microwave applications for EMI and FRI shielding, for assembly and repair of circuit boards and Electronic component manufacturing.

## **PRODUCT PROPERTIES:**

Base	Ероху
Appearance	Grey
Cure Type	Heat cure or Room temperature
	High strength
Benefits	Perfect bond
	<ul> <li>Cold solder for heat sensitive components</li> </ul>
	Excellent choice for Integrated Circuits,
Substrates	aluminum, copper, magnesium, steel, bronze,
	nickel, kovar, ceramic, glass, phenolic and G-10
	epoxy glass boards.
Viscosity @ 25 °C cps	Soft Paste
Shelf Life	6 months
	Microwave applications for EMI and FRI
Typical	shielding, for assembly and repair of circuit
Application	boards and Electronic component
	manufacturing.

## **CURED PROPERTIES:**

Hardness, Shore D	88
Volume Resistivity ohm-cm	3.8 x 10-2

#### **CURE SCHEDULE:**

2 Hours	@ 125°C
1 hour	@ 150°C
30 min	@ 175 °C

## **THERMAL CHARACTERISTICS:**

Thermal Conductivity, Btu/hr/ft2/°F/in:	10.1
Operating Temperature Range, °C:	-55 to +175

## **NASA OUTGASSING RESULTS:**

TTML (Total Mass Loss)	% 0.25
CVCM (Collected Volatile Condensable Materials)	% 0.00
WVR (Water Vapor Recovery)	% 0.07

## **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.
- Apply AA-DUCT N02 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 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.

# **AVAILABILITY:**

This epoxy can be supplied in many different packages.

## **Atom Adhesives**

Email: info@atomadhesives.com 200 Allens Ave, Providence, RI 02903 Phone: (888) 522-6742 - Fax: (877) 522-6742