

70-3812 NC

HIGH THERMAL TRANSFER EPOXY

DESCRIPTION:

70-3812 NC is a two component, aluminum filled epoxy system. This system is used for making heat resistant tools, parts, or bonds that require the highest thermal conductivity and heat resistance. We have developed this extremely conductive epoxy by formulating it with a unique combination of fillers, particle sizes and dispersion techniques.

70-3812 NC has good heat dissipation making this a popular choice for a variety of heat sink applications. Common heat sink bonding applications include fin to base, folded-fin set to base, pin-fin set to base, and cold plate tube to extruded base. The 70-3812RNC is formulated with high performance materials and additives that give heat sink manufacturers improved adhesion and processing advantages.

70-3812 NC **passes NASA's outgassing requirements** per ASTM E-595-07.

FEATURES:

- Excellent Thermal Conductivity
- Superior Adhesion
- Low Viscosity allows quick self leveling

TYPICAL SPECIFICATIONS:

Color	Grey
Viscosity, 25°C,	
Resin	130,000
Mixed	8,000
Specific Gravity, 25°C	1.81
Working time, 100 grams, 25°C	5 Hours
Durometer, Shore D	
25°C	90
100°C	65
Tensile Strength, psi, 25°C	9,000
Aluminum to Aluminum	
1" overlap	2,500
Compressive Strength, PSI, 25°C	18,500
Mix Ratio, by weight	100:10
Operating temperature, °C	-55 to 155
Coefficient of Thermal Expansion, °C	28×10^{-6}
Thermal Conductivity, W/m- °K	4.5
Outgassing	
% TML	.91
% CVCM	.07

MIXING INSTRUCTIONS:

- 1) By weight thoroughly mix 100 parts 70-3812 NC epoxy with 10 parts 70-3812C.
- 2) Cure according to one of the following schedules:

25°C	24 Hours
65°C	45 Minutes
125°C	15-20 Minutes

To reduce the viscosity of the resin and help with air release, warm the resin to moderate temperatures (80-100°F) before adding the curing agent. Some settling is common during storage and transit. Premix resin thoroughly before adding curing agent.

IMPORTANT:

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