

# DIE ATTACH ADHESIVE PRODUCT DATASHEET

Outstanding reliability performance

## NCA88 NCA180

YINCAE PRODUCTS

ADHESIVES

NCA88 NCA180

**TRESKY** NCA88 is a non conductive adhesive which is designed to bond rigid substrates to glass or metal. The rigid substrates can be various such as filled epoxy, ceramic, metal and glass. NCA88 can be quickly cured at low temperature. It can be applied at room temperature without preheating a substrate. After cure there is void free in the cured adhesives and it has demonstrated excellent adhesion and high temperature resistance. The cured NCA88 can be easily reworked.

Excellent low temperature cure performance

Easy Rework

**TRESKY** NCA180 non-conductive adhesive is designed for thermal compression bonding application. After the completion of cure, the bump and pad are forced to mechanically contact together. The main applications include: Smart card, RFID, underfill for flip chip, chip on board, chip stack, chip on flex circuits, chip on the ink cartridge, chip on wafer and wafer on wafer application. It is also suitable for bare chip protection in a variety of advanced packages such as memory cards, chip carriers, hybrid circuits and multi-chip modules.

High Process yield using thermal compression bonding

Good solution to fine pitch and large Flip-Chip

Product Name (Test Method)	NCA88	NCA180
non-conductive adhesive		
PROPERTIES OF UNCURED MATERIAL		
Appearance	NCA180:	White
Specific Gravity (ASTM D 1475-60)	NCA88:	1.05g/cc
	NCA180:	1.7g/cc
Viscosity (Brookfield, 0.5rpm)	NCA88:	15-50kcp
	NCA180:	3-8kcp
PROPERTIES OF CURED MATERIAL		
Tg (ASTM D 3418-82)	NCA88:	58-79°C
	NCA180:	133°C
C.T.E, PPM /°C (ASTM E 831)	NCA88:	$\alpha_1 = 75; \alpha_2 = 182$
	NCA180:	$\alpha_1 = 21; \alpha_2 = 131$
Lap Shear Strength (FR4/FR4)	NCA88:	<b>2000psi</b>
	NCA180:	<b>4500psi</b>
Extractable ions (MIL-STD-883E)		
Na+	<5ppm	
K+	<5ppm	
F-	<5ppm	
Cl-	<10ppm	
Surface insulation resistance (J-STD-004)	Pass	



# TRESKY

## MORE DETAILED

It is designed for high production and friendly environment where process speed and mechanical shock are the key concern. This material is easily dispensed, minimizes induced stresses and provides outstanding reliability performance and excellent mechanical resistance.

## NCA88 RECOMMENDED CURING CONDITIONS

In – line curing or 10-15 minutes at 80 -90°C

Note: 15 min curing time includes the time to allow the bond location to reach the desired cure temperature. Alternate cure profiles may be evaluated

## NCA180 RECOMMENDED THERMAL COMPRESSION BONDING (TCB) PROCESS



Example of process parameters for lead free bump (SAC alloy):

The temperature for substrate: 180 °C;

Bonding pressure: normal

The temperature for vacuum nozzle: 100 °C;

Reflow time: 10 to 30 s

## STORAGE & SHELF LIFE:

6 months provided materials are kept in sealed original container at –25°C for NCA88 and –20 °C for NC180. Storage beyond this period can produce higher viscosity. Protect from moisture, evaporation and foreign materials. Process ability of these products can be adversely affected by evaporation and contamination.

## SAFETY:

NCA... is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detail information please consult our MSDS.

## PACKAGE:

NCA... conductive adhesives are available in 10cc and 30cc package. Other packages are available depending on customer's request. Contact **TRESKY** for order information.

Note: All specifications are subject to change without notice

## REPRESENTED BY:

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