

HK-100 - Zyvex Performance Materials (ZPM) Carbon Nanotube Two-Part Epoxy Adhesive

Description:

HK-100 is a carbon nanotube enhanced ambient or elevated temperature cure two-part epoxy adhesive.

Used for bonding, laminating, filling or potting, HK-100 is ideal for many metals, woods, masonry products, and some plastics and rubbers. HK-100 was also designed to bond Zyvex Performance Material's Arovex composites.

Additional fillers or glass micro-beads may be added to control sag qualities or to control bond-line thickness to a specific specification. Contact your local distributor or ZPM representative for more information.

Quantities

HK-100 is commercially available in a variety of packaging, including quart (3.5 lbs), gallon (14 lbs), five gallon (72 lbs), and drum (720 lbs) kits.

Qualities:

HK-100 exhibits:

- excellent flexibility
- very high T-peel strengths
- very high tensile shear strengths

Mixing Instructions

Stir Part A (resin) and Part B (hardener) well before mixing. In separate container, pour desired amounts of Part A and Part B (according to chart below) and mix thoroughly.

Typical Uncured Properties

	Part A	Part B	Blend
Color	Black	Amber	Black
Mix Ratio (Weight)	10	6	
Mix Ratio (Volume)	10	7	
Pot Life @ 75F, 160 g			60 min
Specific Gravity	1.06	0.91	1.00
Viscosity, cP	40,000	700	7,000

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Shear Strengths (psi) – Acid Etched 6061 T6 Aluminum

Cure Cycle	Test Temp (F)	Typical Value
2 hrs 176F	75	4510
12 hrs RT + 1 hr 176F	75	4000
3 days RT	75	3200
5 days RT	75	3500
7 days RT	75	3540
7 days RT	-40	4400
7 days RT	140	2300
7 days RT (+7 days water soak)	75	3480
7 days RT (+7 days ethyl alcohol soak)	75	2880
7 days RT (+7 days gasoline soak)	75	2900

Shear Strengths (psi) – Arovex Carbon Fiber Epoxy Prepreg

7 Day RT Cure	Temp (F)	Typical Value
Arovex - Arovex (abraded)	75	3440
Arovex - Arovex (abraded) (+7 days water soak)	75	3690
Arovex - 6061 T6 Aluminum (abraded)	75	2940

T-Peel Strengths (pli) – Acid Etched 6061 T6 Aluminum

Cure Cycle	Temp (F)	Typical Value
1 day RT	75	40
12 hrs RT + 1 hr 176F	75	40
3 days RT	75	40