

Adelphi HTA82-1

High Temperature 3000F Resistant, Water based 0 VOC Heat Cure Adhesive

Adelphi HTA82-1 is a single component heat cure and high temperature ceramic and graphite adhesive. It is excellent for bonding, potting and sealing in where high temperature and moisture resistance is required. It withstands temperatures resistances up to 3000F. This makes it a perfect choice for assembling halogen lights, heaters, igniters, resistors and fiber optics. Adelphi HTA82-1 is recommended in all type of mechanical, electrical, instruments and sensor applications and offers a torque strength of 77 ft-lbs.

Temperature Limit, °F (°C)	Components	Viscosity, cP	CTE, in/in/°F x 10-6 (°C)	Application Temperature, °F(°C)	Air Set, Hours Followed by Heat Cure	Heat Cure, °F, Hrs	Shelf Life, Months
3000 (1650)	1	40000-60000	0.33 (0.59)	50-90 (10-32)	1-4	1 Hr Air+ 2@200F	6

Dielectric Strength, volts/mil @ RT	Torque Strength, ft-lbs	After curing at 700 °F for 2 hours.		
		Moisture resistance	Alkali Resistance	Acid Resistance
156	77	Excellent	Good	Good

Excellent adhesion to:

- Ceramics and Composites
- Graphite
- Metals
- Quartz

Applications Include:

- Semiconductors Halogen Lamps
- Heaters
- Igniters
- Fiber Optics
- Resistors
- Semiconductors

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- Temperature Probes
- Ceramic Honeycombs
- Ceramic Textiles
- Refractory Insulation
- Thread-Locking – Excellent

Surface Preparation

For smooth surfaces etching, abrasive blasting or oxidization is required, followed by thorough cleaning prior to application.

Porous substrates should be pre-coated with a binder to prevent separation and absorption of the adhesive binder.

Adhesive Preparation

Always stir each part thoroughly first. This is important as one part adhesives tend to settle. Proportion accurately and mix slowly to avoid entrapping air.

Application

Apply a thin coat of adhesive to each surface using a brush, spatula or dispenser.

Using a clamp or similar tool to maintain a uniform glue line of 2-8mils (200-500 microns). Apply even pressure across the assembly. Wipe away excess material prior to drying.

Curing

Adelphi HTA82-1 requires stepped curing:

1. Air set time of 1-4 hrs.
2. After Air set time, the adhesive needs to be gradually heat cured per following schedule:
 - a. 2 hours @ 200F
 - b. Then 2 hours at 500F
 - c. Then 2 hours at 700F

Heat Cure, °F, (°C)	Hours
200 (93)	2
500(260)	2
700(370)	2

Technical Questions? Call us. We are happy to help! +631-537-8390

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