

### RESBOND 904 - 4000°F ZIRCONIA ADHESIVE

Extreme temperature adhesive provides 4000°F service surpassing the capabilities of most materials.

**Resbond 904** is a smooth, creamy paste that is easily applied and air dried to form a hard surface.

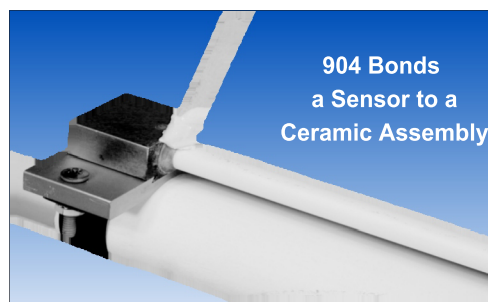
Resistant to molten metals, most chemicals and solvents oxidizing and reducing atmospheres, .

Use 904 Adhesive for bonding and forming electrical, oxidation, erosion and liquid metal resistant coatings for ceramics, graphite, and thermocouple tubes.

**Users Report:**

- Bonded exhaust lines to a Thermogravimetric Analyzer's reaction chamber and used at 3400°F under vacuum.
- Bonded Silica Cloth to furnace tubes for use at 2600°F in a Semi-Conductor's clean room.
- Coated Graphite Crucibles and successfully protected the crucibles from exposure to liquid zinc.
- Coated Aluminum Metal Panels on a Spacecraft and successfully protected the metal panels from Hi-Intensity X-Ray radiation.

**Applications:** Welding, brazing, bonding, electrical seals, thermocouple protection, instruments, high temperature facing for brick, electrical potting, liquid metal handling, etc.



Resbond	904	989
Continous Use Temp. °F	4000	3000
Base	ZrO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>
Compressive Strength (psi)	6000	3000
Flexural Strength (psi)	3000	1100
Thermal Expansion (x 10 <sup>-6</sup> /°F)	4.1	4.5
Thermal Conductivity*	10	15
Dielectric Strength (volts/mil)	250	200
Volume Resistivity (ohm cm)	10 <sup>8</sup>	10 <sup>8</sup>
Components	1	1
Color	Tan	White
Consistency	Paste	Paste

\*BTU in / Hr °F Ft<sup>2</sup>

### RESBOND 989 - 3000°F ALUMINA ADHESIVE

**3000°F Resbond 989** is a high purity, alumina based, general purpose, one component, room temperature curing adhesive.

Bonds to ceramics, graphite, metals, and glass.

Can be dispensed automatically for high speed production applications.

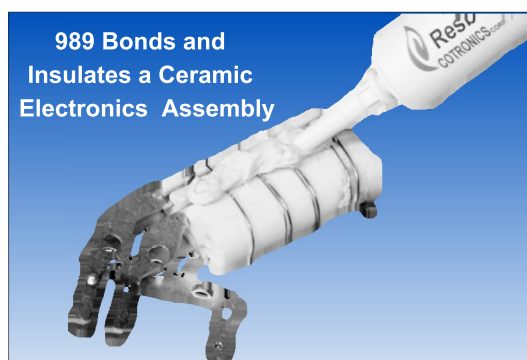
**RESBOND 989** offers high bond strength, solvent and electrical resistance.

Just apply and air dry. Curing may be accelerated with mild heat.

**Users Report:**

- Bonds Silicon Carbide nozzles into alumina sleeving in a high temperature instrument chamber.
- Bonds Nickel pins, measuring 0.03" dia., into 0.04" holes in an aluminum nitride ceramic and held these parts together during immersion in both liquid Nitrogen and into a furnace at 900 °C.
- Bonds Kanthal to Mullite tubes, forming inexpensive custom sized and durable hi-temp. heating elements.

**Applications:** Bonds alumina, metals, ceramics, graphite, and glass in electrical components, appliances, instruments, etc.



**Availability:**

Cat Number	Description	Size
Resbond 904-1	... 4000°F Adhesive.	..... Pint
Resbond 904-2	... 4000°F Adhesive.	..... Quart
Resbond 904-4	... Thinner for 904..	..... Pint
Resbond 989-1	... 3000°F Adhesive .	..... Quart
Resbond 989-2	... 3000°F Adhesive .	..... Gallon
Resbond 989T-1	.. Thinner for 989 .	..... Pint

