

UNIQUE METALLIC ADHESIVES AND PUTTIES

High Bond Strength, Thermal Shock and Impact Resistance

DURABOND™ 950 - 952 - 954

2000°F Metallic Adhesives

Durabond Adhesives and Putties were specially formulated to bond metals, ceramics and dissimilar materials for use to 2000°F.

These metallic composite adhesives overcome the brittle bonds obtained with ceramics and offer some of the ductility and impact resistance associated with soldering and welding. Durabond adhesives can be drilled, tapped, machined, etc.

They do not contain Epoxies or Silicones which would limit their use to 600°F.

These composites are inorganically bonded and chemically cured.

They are safe and easy to use. No odors. No VOC's.

Just mix, apply and cure at room temperature.

Fast Setting Durabond Composites (type FS) are now available. These smooth, creamy, putties are ideal for repairs, patching, casting, potting, etc.

DURABOND™	950	952	954
Use Temperature °F	1200	2000	2000
Base	Aluminum	Nickel	Stainless
Color	Gray	Gray	Gray
Mixed Cured Density (lb./ft ³)	90	85	178
Mixed Cured Density (gms/cc)	1.44	1.69	2.85
Thermal Expansion (10 ⁻⁶ /°F)	10	4	10
Pot Life (Hours)	2	2	2
Bond Strength @ 200°F (psi)	500	400	600
Bond Strength @ 1200°F (psi)	1000	1200	1400
Components	2	2	2
Mixed Ratio (A/B)	100:60	100:120	100:25

Aluminum Durabond™ 950 - Usable to 1200°F

This adhesive was developed for high strength and high temp. bonding. Its easy to apply and cures at low temp. Use with steel, cast iron, aluminum, copper, etc.

Its easily machinable. Can be ground, sanded or polished.

Nickel Durabond™ 952 - Usable to 2000°F

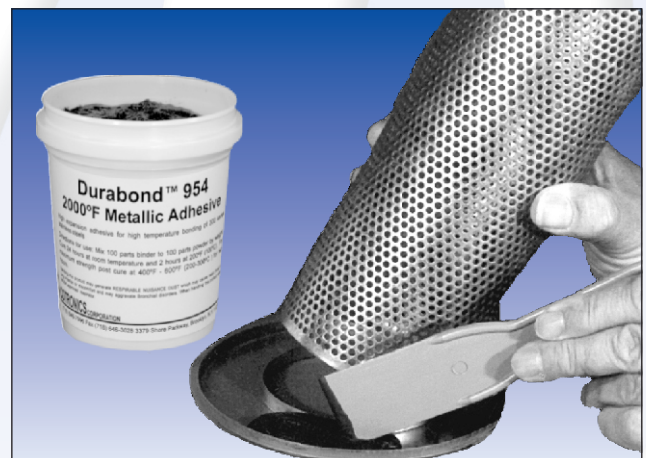
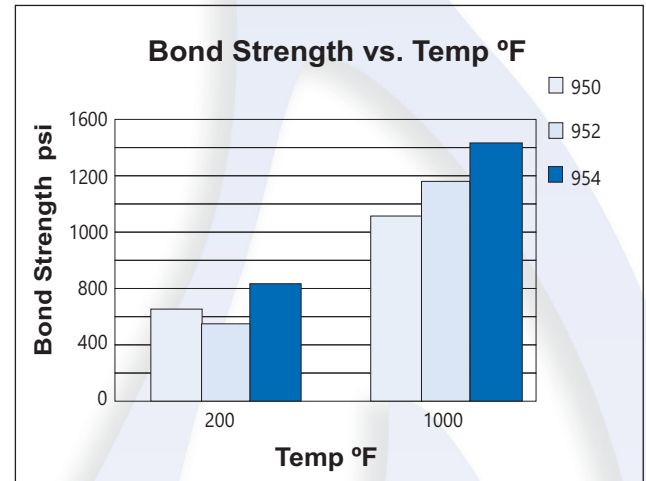
952 was specially formulated to be a low expansion, metallic adhesive for bonding 400 series Stainless Steel, low expansion high temp. alloys, metals and ceramics, etc.

Stainless Steel Durabond™ 954 - Usable to 2000°F

954 is a high expansion adhesive for high temp. bonding of 300 series Stainless, high expansion metals, ceramics, etc.

NEW, Stainless Steel, Sealing Adhesive - Usable to 2000°F

954OD bonds and seals high expansion materials. Ideal for applications requiring the minimum porosity from a ceramic adhesive. Commonly used to prevent leaks from equipment.



Durabond™ 954 Bonds a Stainless Filter Cartridge for use at 1200°F

Cat. No.	Base	Type	Size
950-1	Aluminum	Adhesive	Pint
950-2	Aluminum	Adhesive	Quart
950FS-1	Aluminum	Putty	Pint
952-1	Nickel	Adhesive	Pint
952-2	Nickel	Adhesive	Quart
952FS-1	Nickel	Putty	Pint
954-1	Stainless	Adhesive	Pint
954-2	Stainless	Adhesive	Quart
954FS-1	Stainless	Putty	Pint
954OD-1	Stainless	Sealer	Pint
954OD-2	Stainless	Sealer	Quart

Now Available, Pre-Measured Kits

Ideal for Field Applications

Note: All containers are filled by weight not by volume

COTRONICS RESBOND HIGH TEMP. ADHESIVE PROPERTIES

The following criteria is useful in selecting the optimum ceramic adhesive.

These criteria are offered as a general guide and should be followed in the approximate order listed.

A final manufacturing selection is then based on the results obtained.

If several adhesives are indicated for a specific application, we would recommend a comparative evaluation be made.

1. Choose maximum temperature required.
2. Match thermal expansion between materials to be bonded.
3. Select the required electrical properties.
4. Select the bond strength requirements.
5. Check for porous surfaces (is a primer or pre-coat required).
6. Check moisture or humidity requirements.
7. Choose from the following manufacturing requirements:
 - A) One component, cures by evaporation.
 - B) Two component, chemical set.
 - C) Viscosity and Dispensability.
 - D) Cure time for handling strength.
 - E) Production Requirements.

Composition	Alumina					Zirconia	Zircon	Mica	Magnesia		Silica			Graphite	Metallic		
Resbond™	901	903HP	908	920	989	904	940	907	906	919	905	940LE	7030	931	950	952	954
Descriptions	Fiber Base	Hi-Bond Strength	Molsture Proof	Therm. Cond.	General Purpose	Ultra Temp.	Fast Set	Industrial Strength	High Expan.	High Resist.	Low Expan.	Fast Set	High Strength	Graphite	Alum. Metal	Nickel Metal	Stainless Steel
Service Temp (°F)	3,000	3,000	3,000	3,000	3,000	4,000	2,000	2,300	3,000	2,800	2,500	2,500	1,800	5,400	1,200	2,000	2,000
Base	Al ₂ O ₃	Al ₂ O ₃	Al ₂ O ₃	Al ₂ O ₃	Al ₂ O ₃	ZrO ₂	Zircon	MICA	MgO	MgO-ZrO	SiO ₂	SiO ₂	SiO ₂	Carbon	Al	Nickel	316SS
Compressive Strength (psi)	1,200	7,000	3,000	4,500	3,000	6,000	4,000	3,500	3,000	4,500	3,200	3,500	5,000	3,000	4,000	5,000	4,500
Flexural Strength (psi)	600	3,500	1,100	450	1,100	3,000	1,800	1,250	1,500	450	2,100	2,100	1,450	1,500	3,000	3,000	2,500
Thermal Expansion (10 ⁻⁶ / °F)	4	4	4.5	4.5	4.5	4.1	4.5	4.5	7	2.6	0.3	0.4	7.5	4.1	10	4	10
Thermal Conductivity (BTU - in/ Hr. °F Ft ²)	2	40	15	15	15	15	8	6	40	4	10	5	8.3	60	44	14	10
Dielectric Strength (volts / mil)	200	250	200	270	200	250	125	300	250	270	200	125	100	COND.	COND.	COND.	COND.
Volume Resistivity (ohm-cm)	10 ¹²	10 ¹⁰	10 ¹⁰	10 ¹¹	10 ⁸	10 ⁸	10 ⁸	10 ⁹	10 ⁹	10 ¹¹	10 ¹¹	10 ⁸	10 ⁹	COND.	COND.	COND.	COND.
Components	1	1	2	2	1	1	2	1	2	2	2	2	2	2	2	2	2
Mix Ratio	N/A	N/A	100/33	100/14	N/A	N/A	100/28	N/A	100/42	100/13	100/60	100/45	100/20	100/35	100/60	100/120	100/25
Consistency	Paint	Paint	Paste	Paste	Paint	Paint	Paste	Paste	Paste	Paste	Paste	Paste	Paste	Paste	Paste	Paste	Paste
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