

Aremco offers an impressive selection of high performance epoxies for specialty bonding and potting applications to 600 °F. These products can be applied to a myriad of substrates, offering exceptional chemical, electrical and mechanical properties...

PRODUCT HIGHLIGHTS

Ultra High Temperature

- 526N** Clear-Amber, 1:1 System for Tough Bonding Applications.
- 570** Single-Part Contact Adhesive, Excellent Flexibility.
- 805** Aluminum-Filled, Low Shrinkage, High Thermal Conductivity, For Bonding and Molding Applications.
- 2330** Single-Part, Heat Curable, Silicone Elastomer Adhesive.

High Temperature, Special Purpose

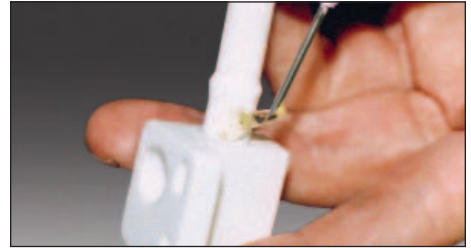
- 568** Aluminum-Filled, 1:1, Good Bond Strength and High Thermal Conductivity.
- 631** Clear-Amber, 1:1, Good Bond Strength and Corrosion Resistance.
- 657** Stainless Steel-Filled, High Corrosion Resistance.
- 807** 10 Minute Set, Non-Sagging, 1:1, Excellent Electrical & Mechanical Properties.
- 820** Clear, 1:1, 45-Minute Cure System with Good Flexibility.
- 2150** Ceramic-Filled, Fast-Setting, High Vibration Resistance and Bond Strength. Ideal for bonding ceramic wear tiles.
- 2315** High Temperature, Thermally Conductive, Low Viscosity, Potting Compound for Electrical Applications.
- 2318** High Temperature, Low Viscosity, Room Temp Curing Potting Compound.

High Temperature, Maintenance and Repair

- 2200** Glass Fiber- and Kevlar-Reinforced, Epoxy-Novolac, High Strength, Excellent Abrasion and Corrosion Resistance.
- 2210** Aluminum and Ceramic-Filled, Vibration and Impact Resistant, For Repairing Aluminum Mold and Wear Surfaces.
- 2220** Ceramic-Filled, High Chemical Resistance, Machinable, For Repairing Deeply-Corroded Parts.

Ultra High Bond Strength

- 2300** Milky Clear, 10:1, Low Viscosity, Exceptional Bond Strength.
- 2310** Ceramic-Filled, 1:1, High Lap Shear and Peel Strength, Autoclavable.



Aremco-Bond™ 526N bonds alumina to alumina ceramic.



Aremco-Bond™ 570 bonds ceramic to copper nozzle.



Aremco-Bond™ 631 bonds sapphire tube to stainless steel.



Aremco-Bond™ 657-FST repairs defects in cast iron.



Aremco-Bond™ 2150 bonds ceramic wear tile.



Aremco-Bond™ 568 bonds copper coil.

HIGH PERFORMANCE EPOXIES PROPERTY CHART

Category		Ultra High Temp				High Temp, Special Purpose							High Temp, Maintenance & Repair			Ultra High Bond Strength			
Product Number		526N ^⑤	570	805	2330	568	631 ^⑥	657	807	820	2150	2315	2318	2200	2210	2220	2300	2310	
Handling & Curing	Mix Ratio by Weight, ^① resin:hardener	1:1	NA	100:12	NA	1:1	1:1	1:1	1:1	1:1	100:13	100:25	100:12	1:1	100:11	100:28	100:10	1:1	
	Specific Gravity, gms/cc @ 25 °C	1.23	.95	1.66	1.43	.85	1.12	1.65	1.39	1.15	1.50	1.95	1.58	1.60	1.80	1.7	1.10	1.35	
	Mixed Viscosity @ 25 °C, cP	8,500	35,000	11,000	38,000	Paste	25,000	Paste	75,000	12,000	Paste	3,000	16,000	Paste	Paste	Paste	5,000	45,000	
	Pot Life, 100 gm mass @ 25 °C, hrs	2.5	NA	≤ 1.0	NA	4.0	4.0	4.0	.07	.25	.25	>8	2	.70	1.0	1.0	.75	.75	
	Recommended Cure, hr/°F	2/200 +2/325	.3/180 +5/350	24/100 +2/200	1/200	2/200	2/200	2/200	1/RT	.75/RT	24/RT	2/160 +2/300	4/RT 2/200	24-48/RT	24-48/RT	12-24/RT	2/150	2/150	
	Alternate Cure, hr/°F	3-4/300	24/RT +5/350	24/RT +2/200	.75/300 or .50/400	24-48/RT	24-48/RT	24-48/RT	—	—	1/RT +4/175	6/250	24-48/RT	4/175	2/200	2/200	48/RT	48/RT	
Cured Properties	Temperature Resistance, °F	-76/572	-76/600	-103/572	-76/572	-85/400	-85/400	-85/400	-67/+266	-58/392	-67/400	-67/+365	-67/+248	-67/400	-67/400	-67/400	-67/350	-67/325	
	Temperature Resistance, °C	-60/300	-60/316	-75/300	-60/300	-65/204	-65/204	-65/204	-55/+130	-50/200	-55/204	-55/+185	-55/+120	-55/204	-55/204	-55/204	-55/175	-55/165	
	CTE, in/in/°F x 10 ⁻⁶ (°C)	18 (33)	48 (86)	25 (45)	94 (170)	33 (60)	27 (49)	30 (54)	32.8 (59.0)	16 (29)	18 (32)	18.9 (34.0)	39.0 (70.2)	19 (34)	15 (28)	18 (32)	37 (66)	43 (77)	
	Thermal Conductivity, Btu-in/hr-ft ² -°F	—	—	12.5	—	9.0	—	—	—	—	—	8.4	4.4	—	11.0	—	—	—	
	Tensile Shear Strength, psi ^②	2,800	3,750	1,800	425	2,500	3,000	2,500	1,135	1,200	2,350	—	1,135	2,300	2,600	2,700	4,560	4,770	
	Flexural Strength, psi ^③	18,000	ND	15,500	—	11,400	10,200	12,000	—	8,000	11,800	12,300	14,100	13,400	14,100	16,000	13,500	12,000	
	Volume Resistivity, ohms-cm	4.0 x 10 ¹⁴	1.0 x 10 ¹³	1.0 x 10 ⁵	2.0 x 10 ¹⁵	1.0 x 10 ⁵	1.2 x 10 ¹⁴	ND	2.0 x 10 ¹⁴	2.0 x 10 ¹⁴	1.0 x 10 ¹⁵	1.0 x 10 ¹⁶	3.0 x 10 ¹⁵	1.0 x 10 ¹⁵	1.0 x 10 ¹³	2.0 x 10 ¹⁵	1.0 x 10 ¹⁵	3.0 x 10 ¹³	
	Dielectric Strength, volts/mil	450	300	50	550	80	440	ND	380	860	460	480	460	460	420	480	380	410	
	Dielectric Constant, 1.0 kHz	3.01	ND	ND	3.3	ND	3.12	ND	4.4	6.0	4.2	4.7	4.8	4.7	6.5	6.8	3.5	4.28	
	Dissipation Factor	.01	ND	ND	0.02	ND	.01	ND	.03	.04	.03	.01	.014	.01	.09	.01	.008	.4	
	Chemical Resistance	Good	Excellent	Good	Good	Excellent	Good	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Good	Good	Very Good	Very Good	Good
	Color	Amber	Black	Gray	Red	Gray	Amber	Gray	Gray	Clear	Light Gray	Black	Black	Rust Brown	Gray	Black	Milky Clear	Black	
	Hardness, Shore D	89	ND	87	43 (Shore A)	75	75	75	73	65	84	92	89	88	89	88	85	78	
Cure Shrinkage, in/in ^④	.01	ND	.003	.003	.002	.002	.002	.009	.008	.004	.003	.003	.009	.005	.003	.003	.001		

Reference Notes

- ① Epoxies mixed in a 1:1 ratio are available in 50 ml dual barrel cartridges. Add “-C” to part number (eg. 568-C). Request 9700 mechanical dispenser, 9800 pneumatic dispenser or 9850 manual plunger. Also request 9905 3.5” or 9910 6” static mixing nozzles.
- ② Tested according to ASTM D1002-94. This is a standard test method for determining the shear strength of single lap-joint metal coupons in tension loading.
- ③ Tested according to ASTM D790, “Flexural Properties of Unreinforced and Reinforced and

- Electrically Insulating Materials, Method - L, Three Point Loading System”.
- ④ Linear shrinkage is measured using a 3/4 lb casting mass.
- ⑤ Also available filled with alumina, 526N-ALOX, black pigment, 526N-BLACK, or both alumina and black pigment, 526N-ALOX-BL.

Application Notes

Surface Preparation: All surfaces must be free of oil, grease, dirt, corrosives, oxides, paint or other foreign matter. Sand blast or abrade non-porous surfaces, or etch using Aremco's Corr-Prep™ CPR2000.

Mixing: Two-component products should be mixed thoroughly prior to dispensing. For high viscosity systems each component can be preheated separately @ 100-125 °F to facilitate mixing and dispensing. Use Aremco's 9700 or 9800 50 ml dispensing systems for precise mixing of two-component products.

Application: In most cases, the adhesive should be applied to both surfaces maintaining a glue line of less than 10 mils. After assembling the parts, pressure should be applied to the assembly to prevent warpage and reduce air entrapment. Refer to curing guidelines in above property chart.

Abbreviations

- NA - Not Applicable
- ND - Not Determined
- RT - Room Temperature