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.
805 Aluminum-Filled, Low Shrinkage, High Thermal Conductivity, For Bonding & Molding.
2330 Single-Part, Heat Curable, Silicone Elastomer Adhesive.
2335 Ceramic-Filled, Low Expansion, High Lap-Shear Strength & Chemical Resistance, Low Outgassing.

High Temperature Potting Compounds

2315 High Temperature, Thermally Conductive, Low Viscosity, Heat Cure.
2315X High Temperature, Thermally Conductive, High Bond Strength and Crack Resistance, Heat Cure.
2318 High Temperature, Low Viscosity, Room Temperature Cure.
2360 Flame Retardant (Self-Extinguishing), Low Viscosity, High Temperature, Heat Cure.
2370 High Temperature, Low Viscosity, Low Expansion, High Glass Transition Temperature & Chemical Resistance.
2380 Ultra-High Thermal Conductivity, High Temperature, Low Expansion, Heat Cure.

High Temperature, Special Purpose

568 Aluminum-Filled, 1:1, High Bond Strength, Excellent Thermal Conductivity.
631 Clear-Amber, 1:1, High Bond Strength & 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 Fast-Setting, Ceramic-Filled, High Vibration Resistance & Bond Strength.

High Temperature, Maintenance & Repair

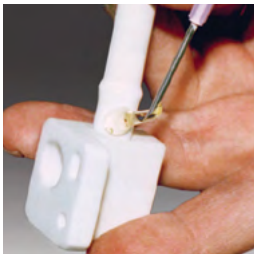
657 Stainless-Steel Filled, 1:1, High Bond Strength & Corrosion Resistance.
2200 Glass Fiber & Kevlar-Reinforced, Epoxy-Novolac, High Strength & Excellent Abrasion & Corrosion Resistance.
2210 Aluminum & Ceramic-Filled, Vibration & Impact Resistant; For Repairing Aluminum Mold & Wear Surfaces.
2220 Ceramic-Filled, High Chemical Resistance, Machinable; For Repairing Deeply Corroded Parts.

Ultra High Bond Strength

2300 Unfilled, Low Viscosity, Rubberized Epoxy, Exceptional Bond Strength & Chemical Resistance.
2310 Ceramic-Filled, 1:1, High Lap Shear & Peel Strength, Resistant to Extreme Shock, Vibration & Flexing; Ideal for Autoclave & Cryogenics.

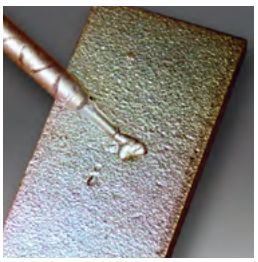
Aremco-Bond™ 631.

Aremco-Bond™ 568 bonds copper coil.



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

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.

HIGH PERFORMANCE EPOXIES PROPERTY CHART

Category		Ultra High Temperature				High Temperature Potting Compounds						High Temperature, Special Purpose					High Temperature, Maintenance & Repair				Ultra High Bond Strength	
	Product Number	**526N[5, 6]**	**805**	**2330**	**2335**	**2315[6]**	**2315X**	**2318**	**2360[7]**	**2370**	**2380**	**568**	**631[5, 6]**	**807**	**820**	**2150**	**657**	**2200**	**2210**	**2220**	**2300**	**2310[6]**
Handling & Curing	**Mix Ratio by Weight,** resin:hardener[1]	1:1	100:12	NA	100:5.5	100:25	100:25	100:12	100:10	100:25	100:100	1:1	1:1	1:1	1:1	100:13	1:1	1:1	100:11	100:28	100:10	1:1
	Specific Gravity, g/cc @ 25 °C	1.23	1.66	1.43	1.80	1.95	1.95	1.58	1.70	1.72	2.7	0.85	1.12	1.39	1.15	1.50	1.65	1.60	1.80	1.70	1.10	1.35
	Mixed Viscosity, cP @ 25 °C	2,500	11,000	38,000	Paste	3,000	4,000	16,000	4,500	3,500	38,000	Paste	25,000	75,000	12,000	91,000	Paste	165,000	40,000	120,000	5,000	45,000
	Pot Life, 100 gm mass @ 25 °C, hrs	> 8.0	≤ 1.0	NA	1.50	2.00	> 8	0.70	4.00	24.00	> 8	4.00	4.00	0.25	0.25	> 8	4.00	0.70	1.00	1.00	0.75	0.75
	Recommended Cure, hr/°F	2/200 + 2/325	24/100 + 2/200	1/200	2/200 + 2/350	2/160 + 2/300	2/160 + 2/300	4/RT + 2/200	3/150 + 1/265	1/210 + 2/350	2/210 + 1/300	2/200	2/200	1/RT	.75/RT	24/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 + 2/200	.75 / 300 or .50 / 400 F	8/300	6/250	4/220	24–48/RT	24–48/RT	3–4/260	4/260	24–48/RT	24–48/RT	—	—	1/RT + 4/175	24–48/RT	4/175	2/200	2/200	48/RT	48/RT
Cured Properties	**Temperature Resistance,** °F	−76 / +572	−103 / +572	−76 / +572	−67 / +572	−67 / +365	−67 / +365	−67 / +248	−40 / 320	−67 / +480	−40 / +430	−85 / +400	−85 / +400	−67 / +266	−58 / +392	−67 / +400	−85 / +400	−67 / +400	−67 / +400	−67 / +400	−67 / +350	−67 / +325
	Temperature Resistance, °C	−60 / +300	−75 / +300	−60 / +300	−55 / +300	−55 / +185	−55 / +185	−55 / +120	−40 / +160	−55 / +250	−40 / +220	−65 / +204	−65 / +204	−55 / +130	−50 / +200	−55 / +204	−65 / +204	−55 / +204	−55 / +204	−55 / +204	−55 / +175	−55 / +165
	CTE, in/in/°F × 10^{-6} (°C)	18 (33)	25 (45)	94 (170)	14 (25)	19 (34)	19 (34)	39 (70)	38 (68)	15 (27)	22 (40)	33 (60)	27 (49)	32 (59)	16 (29)	18 (32)	30 (54)	19 (34)	15 (28)	18 (32)	37 (66)	43 (77)
	Thermal Conductivity, Btu-in/hr-ft^2-°F	—	12.5	—	—	8.4	8.4	4.4	6.3	0.5	14.6	9.0	—	—	—	—	—	—	11.0	—	—	—
	Tensile Shear Strength, psi[2]	2,800	1,800	425	2,000	600	800	1,135	2,000	1,900	8,000	2,500	3,000	1,135	1,200	2,350	2,500	2,300	2,600	2,700	4,560	4,770
	Flexural Strength, psi[3]	18,000	15,500	—	13,600	12,300	12,300	14,100	14,800	16,000	14,000	11,400	10,200	—	8,000	11,800	12,000	13,400	14,100	16,000	13,500	12,000
	Volume Resistivity, ohms-cm @ RT	4.0×10^{14}	1.0×10^{5}	2.0×10^{15}	2.0×10^{15}	1.0×10^{16}	1.0×10^{16}	3.0×10^{15}	1.0×10^{15}	1.0×10^{16}	1.0×10^{15}	1.0×10^{5}	1.2×10^{14}	2.0×10^{14}	2.0×10^{14}	1.0×10^{15}	ND	1.0×10^{15}	1.0×10^{13}	2.0×10^{15}	1.0×10^{15}	3.0×10^{13}
	Dielectric Strength, volts/mil	450	50	550	450	480	480	460	410	420	450	80	440	380	860	460	ND	460	420	480	380	410
	Dielectric Constant, 1.0 kHz	3.01	ND	3.3	4.8	4.7	4.7	4.8	5.5	3.9	3.9	ND	3.12	4.4	6	4.2	ND	4.7	6.5	6.8	3.5	4.3
	Dissipation Factor	0.01	ND	0.02	0.0007	0.01	0.01	0.014	0.021	0.003	0.09	ND	0.01	0.03	0.04	0.04	ND	0.01	0.09	0.01	0.008	0.4
	Chemical Resistance	Good	Good	Good	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Good	Excellent	Excellent	Good	Excellent	Good	Good	Very Good	Very Good	Good
	Color	Amber	Gray	Red	Black	Black	Black	Black	Black	Black	Black	Gray	Amber	Gray	Clear	Light Gray	Gray	Rust Brown	Gray	Black	Milky Clear	Black
	Hardness, Shore D	89	87	43 (Shore A)	90	92	92	89	91	93	92	75	75	73	65	84	75	88	89	88	85	78
	Cure Shrinkage, in/in[4]	0.01	0.003	0.003	0.0031	0.003	0.003	0.003	0.003	0.003	Nil	0.002	0.002	0.009	0.008	0.004	0.002	0.009	0.005	0.003	0.003	0.001

Reference Notes

[1] Epoxies mixed in a 1:1 ratio are available in 50ml dual barrel cartridges. Add "-C" to part number (eg. 568-C). Request 9700 mechanical dispenser, 9800 pneumatic dispenser or 9850 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 ¾ lb casting mass.

[5] Also available filled with aluminum nitride or aluminum oxide, inorganic black pigment or both, and fused silica. Part numbers are 526N-ALN, 526N-ALOX, 526N-ALOX-BL, 526N-BL, 526N-FS, 631-ALN, 631-ALOX, 631-BL, and 631-ALOX-BL.

[6] Meets NASA outgassing requirements.

[7] Self-extinguishing. Meets the requirements of UL-94 V-O for flame retardancy.

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 at 100–125 °F to facilitate mixing and dispensing. Use Aremco's 9700 or 9800 50ml dispensing systems for precise mixing of two component products.

Application: In most cases, the adhesive should be applied to both surfaces maintain 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 the above property chart.

Abbreviations

NA Not Applicable
ND Not Determined
RT Room Temperature

Refer to Price List for complete order information.