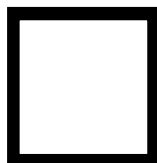




Armstrong Products Division



Resin Technology Group, LLC ☐ 28 Norfolk Ave, S. Easton, MA 02375 ☐ Tel. (508)230-8070 Fax (508)230-2318

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PRODUCT DATA

ARMSTRONG PRODUCT General Purpose Epoxy

Armstrong A-1 and A-3 Epoxy Resin Adhesive General Purpose Epoxy

Description

Armstrong A-1 and A-3 epoxy adhesives are skillfully formulated from specification controlled epoxy resins and inert, high purity filler materials. These adhesives contain ingredients that impart low, surface free energy characteristics, giving them excellent wettability to adherents that are traditionally hard to bond.

Activator "A" is a fast reacting type which, when mixed at a ratio of 4 parts of activator to 100 parts (by weight) of the A-1 or A-3 adhesive, gives a fast initial set time. It is recommended for use when curing is to be done at room temperature. More rapid cures can be accomplished, however, within 2 hours at 165°F.

Activator "E" is mixed at the ratio of 6 parts of activator to 100 parts (by weight) of the A-1 or A-3 adhesive. This is a slow reacting type especially for curing at elevated temperatures. Full cure is obtained in 1 hour at 200°F. This activator is not recommended for room temperature curing.

Applications

Armstrong A-1 or A-3 are suitable for bonding most rigid materials such as metals, wood, glass, ceramics, hard rubber and thermosetting plastics.

Storage

Stored below 25°C out of sunlight and in original unopened containers. Refer to packaging specific quote for shelf life information.

Constants

	A-1	A-3
Viscosity (poise)	6000 - 9000	Paste
Specific Gravity	1.60	1.60
Color	Red-Brown	Black

Properties

	A-1/"A"	A1/"E"	A3/"A"	A3/"E"
Mixed Visc, poise @ 77°F	4,300	4,000	5,000	4,900
Density, lbs/cubic in	.058	.061	.067	.065
Pot Life @ 77°F	30 min	2-3 hrs	30 min	2-3 hrs
Volume Resistivity (ohm/cm) @200°F		3.0x10 ¹⁴		
Dielectric Constant (1kc)		15.3		
Dissipation Factor (1kc)		0.2		

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Physical Properties

	A-1/A''	A-1/A''	A-1/E''	A-3/A''	A-3/A''	A-3/E''
	7 days @ R.T.	2 hrs @ 165°F	1 hr @ 200°F	7 days @ R.T.	2 hrs @ 165°F	1 hr @ 200°F
Cure						
Bond Strength, psi	1150	2070	4650	1110	2130	4500
Ult. Compressive Strength, psi x 1000	15.2	13.4	15.4	10.8	13.3	13.1
T.C.E. (in/in/°C x 10 ⁻⁵)	4.3	---	4.3	4.2	---	4.4
Elongation, %	1.4	2.0	1.7	1.2	1.5	1.9
Tensile Strength, psi	3000	4020	3960	3070	4740	5180
Cleavage, psi	830	1190	1810	770	1400	1870
Tensile Shear Strength, psi						
at Room Temperature	1600	2400	3010	1530	2160	2250
at 180°F	1460	3180	3450	880	3250	1700
at -60°F	1100	1960	1940	890	1425	1980
After 7 days in						
Ammonia, 28%	1820	1930	2880	2380	1970	3030
Distilled Water	1730	2150	2830	1750	1600	3130
Salt Water, 10%	1980	1770	2850	2300	1720	3100
Acetone	1980	2200	3000	2280	1730	2830
Glacial Acetic Acid	1100	2250	2700	1830	1510	2350
Toluene	1800	2000	3030	2050	1700	2780
Ethylenedichloride	2000	2050	3000	2200	1470	2800
Ethyl Acetate	1380	2190	2000	1200	1560	2000
Hexane	1250	2580	2580	950	1970	2180
After 30 days in 100% R.H.	1270	3070	2700	1530	1900	2390
Steel to Steel	1850	1660	3350	---	---	3350

**Run on Aluminum to Aluminum Except as Noted

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