Armstrong Products Division

PRODUCT DATA

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ARMSTRONG PRODUCT
General Purpose Epoxy

Armstrong C-4 Epoxy Resin Adhesive with Activator "W"

Description

Activator "W" is a curing agent for epoxy resins and has a wide range of applications. Combined with Armstrong C-4 resin, this system makes an excellent adhesive. Activator "W" features built in flexibility. By varying the ratio of the Activator, hardness or flexibility may be altered from a hard, strong material to a soft, resilient system.

Applications

C-4 with Activator "W" has excellent adhesion to such materials as rubber, thermosetting plastics, most thermoplastics, concrete, ceramics, glass, all metals and many others. A few applications utilizing these systems are potting connectors and terminations, bonding CAB illuminated signs, bonding various parts of luggage, including magnesium and polypropylene, concrete coating, bonding traffic markers, attaching aisle and seat markers in stadiums, binder for solid fuel granules and bonding rocket nozzles for machining.

Storage

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

Proportions:

The Activator "W" cures well at room or elevated temperatures. Unlike some room temperature curing systems, the pot life of this system is relatively long. Generally, Activator "W" is mixed at the ratio of 1:1 by weight, with the C-4 resin. Ratios of 3 Parts "W" and 2 parts resin impart flexibility and 2 parts "W" and 3 parts resin or 1 part "W" and 2 parts resin are used for rigid, hard systems. Maximum chemical and solvent resistance is obtained by using the lower ratio of Activator W".

Constants	C-4	W
Viscosity, poise @ 77°F	6	375
Color	Pale Amber	Amber
Specific Gravity	1.08	0.96

Properties	Ratio	C-4/W
Mixed Viscosity, poise @ 77°F	1:1	78
	2:3	82
	70:30	34
Density, lbs/cubic inch	1:1	.038
	2:3	.038
	70:30	.040
Pot Life @ 77°F (100 grams)		90 mins

Physical Properties

	1:1	1:1	2:3	2:3	70:30
Cure	7 days @ RT	2 hrs @165°F	7 days @ RT	2 hrs @165°F	2 hrs @165°F
Bond Strength, psi	1640	3280	1360	2450	-----
Ult. Compressive Strength, psi x 1000	21.6	20.7	26.2	32.2	-----
Elongation %	6.3	7.0	8.8	8.0	5.7
Tensile Strength, psi	7080	5610	1130	1570	7130
Cleavage, psi	-----	1410	-----	1460	-----
Shear Strength, psi**					
RT	3480	4720	2380	2590	2930
180°F	508	740	360	420	720
-60°F	1890	2910	2640	3160	2350
After 7 days in:					
Ammonia, 28%	2080	3140	2160	2130	1900
Distilled Water	2060	3840	2230	2370	2390
Salt Water 10%	2130	4100	1960	1970	2180
Acetone	1780	2540	1320	1700	2230
Glacial Acetic Acid	1430	2100	1190	1420	1400
Toluene	2040	2530	1320	1500	2050
Ethylenedichloride	2090	2420	1360	1100	2360
Ethyl Acetate	1930	2560	1690	1630	2140
Hexane	2700	34400	1780	1900	2780
30 days 100% RH	2320	2900	1350	1510	2180
Barcol Hardness	-----	20-25	-----	60-65*	-----
Linear Shrinkage in/cm					
Cast @ 75°F	-----	-----	-----	-----	.0025
Cast @ 150°F	-----	-----	-----	-----	.014
Compressive Yield, psi	-----	-----	-----	9100*	-----
Tensile Ultimate, psi	-----	-----	-----	6600*	-----
Flexural Modulus	-----	-----	-----	2.5×10^{5}*	-----
Flexural Ultimate, psi	-----	-----	-----	12300*	-----
T.C.E. (in./in/°C x 10^{-5})	-----	-----	-----	2.06*	-----

**Tests run on Aluminum to Aluminum