

N109 W13300 ELLSWORTH DRIVE GERMANTOWN, WI 53022
262-253-5900 FAX 262-253-5919

DESCRIPTION:

Resinlab® EP1200LV is a low viscosity version of EP1200, which is a highly filled, medium viscosity black casting resin designed for applications requiring a moderate thermal conductivity, flexibility, and a low CTE. It contains abrasive aluminum oxide filler which can introduce wear considerations for wetted components.

EP1200LV was formulated to a 1A:1B by volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment.

EP1200LV passes ResinLab testing to meet the requirements of UL Standard 94 for a horizontal burn rating at 1/4" thickness.

EP1200LV Black will reach handle cure within 24 hours at room temperature and final cure within 72 hours. Final cure properties can be achieved more quickly by the application of heat after product has gelled. Cure times and temperatures typical for most applications range from 2 hours at 65 °C to 30 minutes at 100 °C. Time to heat substrate must be taken into account with cooler temperatures extending the work time.

TYPICAL PROPERTIES:

All properties given are at 25 °C unless otherwise noted.

Property:	Value:	Test Method or Source:
Color	Black	Visual
Mix Ratio	Part A to Part B	Calculated
By weight	1 to 1	
By volume	1 to 1	
Cure Schedule	24 hours @ 25 °C for handle cure 72 hours @ 25 °C for full cure 2 hours @ 65 °C 30 minutes @ 100 °C	
Viscosity – Part A	7,500 cps @1/s	Rheometer parallel plate 25mm@1/s
Viscosity – Part B	22,000 cps @1/s	455300006291
Viscosity - Mixed	25,000 cps @1/s	
Specific Gravity – Part A	1.55	Calculated
Specific Gravity – Part B	1.66	
Specific Gravity - Mixed	1.61	
Pot Life, defined as time to double viscosity	15-20 minutes	Rheometer parallel plate 25mm@1/s 455300006291
Gel Time	80 minutes	455300005339/Gardco Hot Pot Gel Timer
Glass Transition Temperature/Tg	1 °C	453560822409 by DSC
Hardness	70 Shore D	455300006287/ASTM D2240
Water Absorption	0.19% after 24 hours	457561824543/ASTM D570
Tensile Properties:		4535601224470/ASTM D638
Strength	1,300 psi	
Elongation	30%	
Modulus	57,000 psi	

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Lap Shear Strength 0.010" bond line Al to Al	1,100 psi	455300005642/ASTM D1002
Compressive Properties:		4535601224467/ASTM D695
Strength	17,000 psi	
Modulus	71,000 psi	
Flame Resistance	Passes ResinLab testing with HB rating at 0.25 inch thickness. Not UL certified.	UL94
Thermal Conductivity by LFA	0.40 W / (m.K)	453560822409/ASTM E1461
Surface Resistivity	9.47 x 10 ¹⁵ ohm/sq (@ 20 %RH)	455300006612/ASTM D257
Volume Resistivity	3.61 x 10 ¹⁴ ohm-cm (@ 18 °C)	
Dielectric Constant / Dissipation Factor		455300006513/ASTM D150
@ 100 Hz	3.5, 0.030	
@ 100 kHz	3.2, 0.020	
AC Dielectric Strength	500 V/mil* 20 kV/mm*	ASTM D149, Method A, tested in oil Extrapolated from EP1200 Black
Coefficient of Thermal Expansion by TMA	90 ppm/ °C below Tg 171 ppm/ °C above Tg	455300005340 /ASTM E831 TMA, 5 °C/min
Temperature Range	-40 to 150 °C**	

* Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.

** Temperature Rating is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.

*** This TDS contains values that have been updated. The values reported in this technical data sheet are typical values of the product, and are highly dependent on test conditions and methodology. We actively seek the most precise and accurate ways to measure and interpret performance of our products, and to update estimated values with measured values. The formula has not been revised or changed in any way. Although the values on paper have changed, you can expect the same performance of the product.

INSTRUCTIONS:

1. Bring both components to room temperature prior to mixing.
2. Cartridge format: Mixer should be attached keeping the cartridge vertical and any air pocket purged this way. After the mixer contains material, the mixer tip can be dropped to dispense pre-bleed amount. Attach a new static mixer with each cartridge, then pre-bleed the first 3 inches of dispensed material or until a uniform color is obtained. Maintain adequate velocity during dispensing to ensure complete mixing.
3. Bulk format: weigh and mix parts A and B accurately and thoroughly, scraping sides of container often. Do not pour from mixing container, transfer to a new container as residual unmixed material may cause a tacky spot on the surface of the casting. Maintain adequate velocity during dispensing to ensure complete mixing.
4. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.
5. Clean up uncured resin with suitable organic solvent such as MEK, acetone or other organic solvent.

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SHELF LIFE AND STORAGE:

6 months at 5 °C
3 months at 25 °C
Specialty packaging may be less.

Many epoxy resin systems are prone to crystallization as epoxy resin is a super-cooled fluid. This condition may give the product a gritty or grainy appearance (or hazy in clear products). Products in this state will not usually cure to normal and expected properties. In extreme cases it may appear solid and cured. Fluctuating temperatures (within 5 to 50 °C) aggravate this phenomenon. Heating the individual component to 50 to 60 °C while stirring can usually restore products to original state. Storage at 25 +/- 10 °C is optimum for most products.