TECHNICAL DATA SHEET
EP1215RC Clear

4/15/2020

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

DESCRIPTION:

ResinLab® EP1215RC Clear is a two part unfilled epoxy structural adhesive designed for bonding applications requiring high strength and good impact resistance. This is a REACH compliant version of EP1215 Clear.

EP1215RC Clear cures at room temperature to a tough, flexible to semi-rigid polymer depending upon the mix ratio employed. It has good wetting and adhesion to most surfaces and has a free flowing viscosity. It has very good resistance to water, acids and bases and most organic solvents.

Hydrogenated terphenyls were removed from this product to address global regulatory concerns regarding its role as a very persistent and very bioaccumulative compound in the environment. While it's not a regulatory requirement at this time ResinLab is revising the chemistry in many of our hydrogenated terphenyl containing products.

TYPICAL PROPERTIES:

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

Property:	*Value:*	*Test Method or Source:*
Color	Clear	Visual
Mix Ratio **By weight** **By volume**	Part A to Part B 1.19 to 1 1 to 1	Calculated
Cure Schedule	24 – 48 hours @ 25 °C 2 hours @ 65 °C 10 minutes @ 100 °C	
Viscosity – Part A **Viscosity – Part B** **Viscosity - Mixed**	13,000 cps @1/s 32,000 cps @1/s 20,500 cps @1/s	Rheometer parallel plate 25mm 455300006291
Specific Gravity – Part A **Specific Gravity – Part B** **Specific Gravity - Mixed**	1.16 0.98 1.07	Calculated
Pot Life, defined as the time it takes for initial mixed viscosity to double	52 minutes	Rheometer parallel plate 25mm@1/s 455300006291
Gel Time	144 minutes/100cc sample	455300005339/Gardco Hot Pot Gel Timer
Glass Transition Temperature/Tg	64 °C	453560822409 by DSC
Hardness	80 Shore D	455300006287/ASTM D2240
Water Absorption	0.47% after 24 hours	457561824543/ASTM D570
Peak Exotherm	27 °C after 74 minutes for 40mL sample	455300005593 by Type K thermocouple
Tensile Properties: **Strength** **Elongation** **Modulus**	 3,000 psi 2% 187,000 psi	4535601224470/ASTM D638
Lap Shear Strength **0.010" bond line Al to Al**	 2,100 psi	4535601224468/ASTM D1002
Compressive Properties: **Yield Strength**	 8,500 psi	4535601224467/ASTM D695

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Compressive Strength	10,500 psi	
Modulus	98,000 psi	
Surface Resistivity	6.10 x 10^{14} ohm/sq (@ 17%RH)	455300006612/ASTM D257
Volume Resistivity	5.60 x 10^{14} ohm-cm (@ 23 °C)	
Dielectric Constant / Dissipation Factor		455300006513/ASTM D150
@ 100 Hz	3.2, 0.02	
@ 100 kHz	3.0, 0.02	
Coefficient of Thermal Expansion by TMA	79 ppm/ °C below Tg 210 ppm/ °C above Tg	455300005340/ASTM E831 TMA, 5 °C/min
Operating Temperature Range	-40 to 150 °C**	
Relative Thermal Index (RTI)	90 °C **	UL746B, Table 7.1 Generic Value Based on Composition

* Asterisk denotes values considered typical to associated resin systems or extrapolated from other test results.
** Operating Temperature Range is based on average design requirements and is not intended as a guarantee of suitability for all applications operating at that temperature.

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.

SHELF LIFE AND STORAGE:

12 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.