TECHNICAL DATA SHEET
EP1290 Gray

12/14/2018

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

DESCRIPTION:

Resinlab® EP1290 Gray is a two part mineral filled epoxy adhesive designed for bonding metals and plastics. It cures at room temperature to a tough, semi-flexible material. It has good wetting to most surfaces and is free flowing to penetrate cavities, self-level and release trapped air. This product can withstand vibration and impact. It also has good resistance to water, salt spray, inorganic acids and bases and most organic solvents.

EP1290 Gray was formulated to a 1A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. EP1290 Gray will reach handle cure at room temperature within 16 – 24 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 2 hours at 65 °C to 20 minutes at 100 °C are typical for most applications. Time to heat substrate must be taken into account. Cooler temperatures will also extend work time and increase cure times.

TYPICAL PROPERTIES:

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

Property:	*Value:*	*Test Method or Source:*
Color	Gray	Visual
Mix Ratio **By weight** **By volume**	Part A to Part B 1.02 to 1 1 to 1	Calculated
Cure Schedule	16-24 hours at 25 °C 2 hours @65 °C 20 minutes @ 100 °C	
Viscosity – Part A **Viscosity – Part B** **Viscosity - Mixed**	94,000 cps @1/s 31,000 cps @1/s 56,000 cps @1/s	Rheometer parallel plate 25mm@1/s 455300006291
Specific Gravity – Part A **Specific Gravity – Part B** **Specific Gravity - Mixed**	1.34 1.31 1.33	Calculated
Pot Life, defined as the time it takes for initial mixed viscosity to double	73 minutes	Rheometer parallel plate 25mm@1/s 455300006291
Work Life	>2hours/50g mass	453560822627
Glass Transition Temperature/Tg	31 °C	453560822409 by DSC
Hardness	75 Shore D	455300006287/ASTM D2240
Water Absorption	0.17% after 24 hours	457561824543/ASTM D570
Tensile Properties: **Strength** **Elongation** **Modulus**	 3,000 psi 25-30% 98,000 psi	455300006285/ASTM D638
Lap Shear Strength **0.010” bond line Al to Al**	 3,000 psi	455300005642/ASTM D1002
Compressive Properties: **Strength** **Modulus**	 20,000 psi 13,000 – 18,000 psi	455300006265/ASTM D695

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Coefficient of Thermal Expansion by TMA	55 ppm/ °C below Tg 187 ppm/ °C above Tg	455300005340/ASTM E831 TMA, 5 °C/min
Temperature Range	-60 °C to 150 °C**	

** 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. Cartridges should be stored in a vertical position to allow any air to accumulate at the tip. 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. Ease of dispensing is greatly affected by ambient/material temperatures.

2. If used in bulk, 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. If the product is used in a side-by-side cartridge, 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. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.

4. 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.