TECHNICAL DATA SHEET

EP9651T2 Clear

Revision date: 11/9/2023

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

DESCRIPTION:

ResinLab® EP9651T2 Clear is a two-part structural epoxy adhesive designed for small to medium sized castings. It bonds to a variety of materials and cures quickly at room temperature to a tough, semi rigid polymer. It has good thermal shock resistance and good resistance to water, acids, bases, and most organic solvents. It maintains the same non-sag properties and performance of EP965T2 Clear.

EP9651T2 Clear was formulated to a 1:1 by volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. The product will reach full cure at room temperature within 24-48 hours. Final properties can be achieved faster by the application of heat after the product has gelled. Cure times and temperatures range from 1 hour at 65 °C to 15 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	Clear	Visual
Mix Ratio	Part A to Part B	Calculated
Mix Ratio by weight	1.13 to 1	
Mix Ratio by volume	1 to 1	
Cure Schedule	24-48 hrs @ 25 °C 1 hr @ 65 °C 15 min @ 100 °C	
Viscosity - Part A	500,000 cP	TA HR20 Rheometer 25mm parallel plate @ 1/s DCV6100723
Viscosity - Part B	100,000 cP	
Viscosity - Mixed	115,000 cP	
Specific Gravity - Part A	1.17	Calculated
Specific Gravity - Part B	1.04	
Specific Gravity - Mixed	1.11	
Pot Life defined as the time it takes for initial mixed viscosity to double	25 minutes	TA HR20 Rheometer parallel plate 25mm @ 1/s DCV6100723
Hardness	80 Shore D	455300006287/ASTM D2240
Glass Transition Temperature/Tg	43 °C	453560822409 by DSC
Tensile Properties:		4535601224470/ASTM D638
Strength	6,800 psi	
Elongation	4 %	
Modulus	300,000 psi	
Lap Shear Strength		4535601224468/ASTM D1002
0.010" Bond Line, Al to Al	1,200 psi	

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Property:	*Value:*	*Test Method or Source:*
Compressive Properties:		4535601224467/ASTM D695
Ultimate Strength	26,000 psi	
Modulus	230,000 psi	
Operating Temperature Range	-55 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.
*** 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 to room temperature prior to use.
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: stir until homogeneous 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. Clean up uncured resin with suitable organic solvent such as MEK or acetone.
5. Allow to cure undisturbed until product is fully gelled or tack-free to the touch.

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.