TECHNICAL DATA SHEET

EP11HTFSRC Tan

Issue date: 3/19/2024

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

DESCRIPTION:

ResinLab® EP11HTFSRC Tan is a two-part filled epoxy adhesive designed for bonding metals and plastics. This is a REACH compliant version of EP11HTFS Tan. *EP11HTFSRC Tan* cures at room temperature to a tough, semi-rigid material. It has good wetting to most surfaces and is very thixotropic to resist running and sagging. This product has good vibration and impact resistance. It will also be resistant to degradation from exposure to water, salt spray, inorganic acids and bases and most organic solvents.

EP11HTFSRC Tan was formulated to a 1A:1B volume mix ratio for use in side-by-side dispensing cartridges and meter/mix and dispense equipment. *EP11HTFSRC Tan* will reach full cure in 24-48 hours. Cure time can be accelerated by the application of heat. Times and temperatures from 1 hour at 65 °C to 15 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	Tan	Visual
Mix Ratio	Part A to Part B	Calculated
Mix Ratio by weight	0.95 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	700,000 cP	TA HR20 Rheometer 25mm parallel plate @ 1/s DCV6100723
Viscosity - Part B	340,000 cP	
Viscosity - Mixed	490,000 cP	
Specific Gravity - Part A	1.27	Calculated
Specific Gravity - Part B	1.33	
Specific Gravity - Mixed	1.30	
Pot Life defined as the time it takes for initial mixed viscosity to double	49 minutes	TA HR20 Rheometer parallel plate 25mm @ 1/s DCV6100723
Gel Time	53 minutes (50cc sample)	Visual, Observed cup and stick
Peak Exotherm	54 °C for 50 mL sample	455300005593 by Type K thermocouple
Hardness	83 Shore D	455300006287/ASTM D2240
Glass Transition Temperature/Tg	55 °C	453560822409 by DSC
Water Absorption	0.19 %	24 hr immersion 457561824543/ASTM D570

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Property:	*Value:*	*Test Method or Source:*
Tensile Properties:		4535601224470/ASTM D638
Strength	4,700 psi	
Elongation	1.4 %	
Modulus	454,000 psi	
Lap Shear Strength		4535601224468/ASTM D1002
0.010" Bond Line, Al to Al	3,000 psi	
Compressive Properties:		4535601224467/ASTM D695
Yield Strength	13,800 psi	
Ultimate Strength	21,000 psi	
Modulus	240,000 psi	
Coefficient of Thermal Expansion by TMA:		455300005340/ASTM E831 TMA, 5 °C/min
below Tg	52 ppm/°C	
above Tg	201 ppm/°C	
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.

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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.