

Date: July 2019
Rev: IV
No. of Components: Two
Mix Ratio by Weight: 100 : 25
Specific Gravity: Part A: 1.63 Part B: 1.16
Pot Life: 1 Hour
Shelf Life- Bulk: One year at room temperature
Shelf Life- Syringe: Six months at -40°C

Recommended Cure: 80°C / 1 Hour

Minimum Alternative Cure(s):
May not achieve performance properties listed below
 23°C / 24 Hours

NOTES:

- Container(s) should be kept closed when not in use.
- Filled systems should be stirred thoroughly before mixing and prior to use.
- Performance properties (rheology, conductivity, others) of the product may vary from those stated on the data sheet when bi-pak/syringe packaging or post-processing of any kind is performed. Epoxy's warranties shall not apply to any products that have been reprocessed or repackaged from Epoxy's delivered status/container into any other containers of any kind, including but not limited to syringes, bi-paks, cartridges, pouches, tubes, capsules, films or other packages.
- Syringe packaging will impact initial viscosity and effective pot life, potentially beyond stated parameters.

Product Description: EPO-TEK® T905BN-4 is a two component, room temperature cure, thermally conductive epoxy for general adhesive bonding, sealing, potting and encapsulation applications.

Typical Properties: Cure condition: 80°C / 1 Hour Different batches, conditions & applications yield differing results.
 Data below is not guaranteed. To be used as a guide only, not as a specification. * denotes test on lot acceptance basis

PHYSICAL PROPERTIES:			
* Color (before cure):	Part A: White	Part B: Light mauve	
* Consistency:	Granular paste		
* Viscosity (23°C) @ 20 rpm:	12,000-18,000	cPs	
Thixotropic Index:	2.6		
* Glass Transition Temp:	≥ 50	°C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -40-200°C @20°C/Min)	
Coefficient of Thermal Expansion (CTE):			
	Below Tg:	24	x 10 ⁻⁶ in/in°C
	Above Tg:	120	x 10 ⁻⁶ in/in°C
Shore D Hardness:	79		
Lap Shear @ 23°C:	1,412	psi	
Die Shear @ 23°C:	≥ 5	Kg	1,778 psi
Degradation Temp:	350	°C	
Weight Loss:			
	@ 200°C:	0.18	%
	@ 250°C:	0.64	%
	@ 300°C:	1.44	%
Suggested Operating Temperature:	< 300	°C (Intermittent)	
Storage Modulus:	1,152,068	psi	
* Particle Size:	≤ 300	microns	

ELECTRICAL AND THERMAL PROPERTIES:		
Thermal Conductivity:	1.8	W/mK
Volume Resistivity @ 23°C:	≥ 4 x 10 ¹⁴	Ohm-cm
Dielectric Constant (1KHz):	3.82	
Dissipation Factor (1KHz):	0.012	

Epoxyes and Adhesives for Demanding Applications™

This information is based on data and tests believed to be accurate. Epoxy Technology, Inc. makes no warranties (expressed or implied) as to its accuracy and assumes no liability in connection with any use of this product.

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EPO-TEK® T905BN-4 Advantages & Suggested Application Notes:

- A moderate viscosity resin with flowing properties enables potting of cavities, packages and housings.
- Contains a coarse grade of filler, which needs to be taken into account in all bonding, sealing and potting applications. Contact techserv@epotek.com to review your choice.
- Pure white color after cure allows for easy inspection by operators on common electronic packaging surfaces.
- Versatility in cure: 23°C and 100°C ambient, box oven or tunnel oven processes.
- Suggested Applications:
 - Hybrids: Thermally conductive adhesive bonding ceramics and metals.
 - Electronics:
 - General PCB level potting and adhesive applications. Bonding metal and composite heat sinks to PCBs or SMDs.
 - Transformers: potting of Cu coils, magnets, inductors and other SMDs into their respective casing.
 - Medical Devices: Heat sinking of x-ray and ultrasound circuits via adhesive and potting processes.

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