# Preliminary Product Information Sheet

## EPO-TEK® TV1003-LV (*formerly 98-5-3*)

*Note: These are typical properties to be used as a guide only, not a specification. Data below is not guaranteed. Different batches, conditions and applications yield differing results.*

**Date:** September 2017
**Rev:** III
**No. of Components:** Single
**Mix Ratio by Weight:** N/A
**Specific Gravity:** 1.26
**Pot Life:** 28 Days
**Shelf Life- Bulk:** One year at room temperature

**Recommended Cure: Pre-Bake: 150°C / 1 Hour plus 275°C / 1 Hour**

**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.

**Product Description:** Screen printable polyimide paste for semiconductor wafer coating applications. It is a lower viscosity version of EPO-TEK® TV1003.

**MATERIAL CHARACTERISTICS*:**

| **PHYSICAL PROPERTIES:** | **Cure condition:** varies as required | |
|---|---|---|
| Color (before cure): | Ivory | |
| Consistency: | Smooth paste | |
| Viscosity (23°C) @ 0.5 rpm: | 136,000 | cPs |
| Thixotropic Index: | 2.7 | (between 0.5 & 5 RPM) |
| Glass Transition Temp: | 241 | °C (Cure: 150°C/ 1 Hr + 275°C / 1 Hr; Ramp 20°C/Min to 350°C) |
| Coefficient of Thermal Expansion (CTE): | | |
| Below Tg: | 28 | x $10^{-6}$ in/in°C |
| Above Tg: | 36 | x $10^{-6}$ in/in°C |
| Shore D Hardness: | 60 | |
| Lap Shear @ 23°C: | N/A | |
| Die Shear @ 23°C: | < 1 | Kg |
| Degradation Temp: | 541 | °C |
| Weight Loss: | | |
| @ 200°C: | < 0.05 | % |
| @ 250°C: | < 0.05 | % |
| @ 300°C: | < 0.05 | % |
| Suggested Operating Temperature: | < 400 | °C (Intermittent) |
| Storage Modulus: | 284,295 | psi |
| Ion Content: | $Cl^-$: 3 ppm | $Na^+$: 15 ppm |
| | $NH_4^+$: 96 ppm | $K^+$: 0.5 ppm |
| Particle Size: | ≤ 10 | microns |

| **ELECTRICAL AND THERMAL PROPERTIES:** | | |
|---|---|---|
| Thermal Conductivity: | 0.8 | W/mK |

**The data above is INITIAL only - it may be changed at any time, for any reason without notice to anyone. It is provided only as a guide for evaluation/consideration.**

* These material characteristics are typical properties that are based on a limited number of samples/batches. All properties are based on the cure indicated above. Some properties may vary as manufactured quantities are scaled up to commercialized production levels.

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