**Manufacturer:**
Epoxy Technology

**Product Name:**
EPO-TEK® OD2002 Thermally and Electrically Insulating High Tg Epoxy, Heat Cure (2.5g)

**Manufacturer Part Number:**
OD2002-2.5G



# EPO-TEK® OD2002

**Technical Data Sheet**
**For Reference Only**
*High Tg Optical Epoxy*

| | | | |
|---|---|---|---|
| **Date:** | December 2022 | | **Recommended Cure: 150°C / 1 Hour** |
| **Rev:** | XV | | |
| **No. of Components:** | Two | | Minimum Alternative Cure(s): |
| **Mix Ratio by Weight:** | 20 : 1 | | *May not achieve performance properties listed below* |
| **Specific Gravity:** | Part A: 1.20 | Part B: 1.02 | 150°C / 5 Minutes |
| **Pot Life:** | 4 Hours | | 120°C / 15 Minutes |
| **Shelf Life- Bulk:** | One year at room temperature | | 100°C / 30 Minutes |
| **Shelf Life- Syringe:** | Six months at -40°C | | |

**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® OD2002 is a two component, thermally and electrically insulating, optical epoxy. Designed as a high Tg yet still compliant alternative to EPO-TEK® 353ND.

**Typical Properties:** Cure condition: 150°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: Cloudy | Part B: Amber | |
| * Consistency: | Viscous liquid | | |
| * Viscosity (23°C) @ 5 rpm: | 24,000-42,000 | cPs | |
| Thixotropic Index: | N/A | | |
| * Glass Transition Temp: | ≥ 140 | °C (Dynamic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min) | |
| Coefficient of Thermal Expansion (CTE): | | | |
| Below Tg: | 45 | x $10^{-6}$ in/in°C | |
| Above Tg: | 187 | x $10^{-6}$ in/in°C | |
| Shore D Hardness: | 69 | | |
| Lap Shear @ 23°C: | 1,570 | psi | |
| Die Shear @ 23°C: | ≥ 10 | Kg 3,556 psi | |
| Degradation Temp: | 443 | °C | |
| Weight Loss: | | | |
| @ 200°C: | < 0.05 | % | |
| @ 250°C: | < 0.05 | % | |
| @ 300°C: | < 0.05 | % | |
| Suggested Operating Temperature: | < 350 | °C (Intermittent) | |
| Storage Modulus: | 263,291 | psi | |

| ELECTRICAL AND THERMAL PROPERTIES: | | |
|---|---|---|
| Thermal Conductivity: | N/A | |
| Volume Resistivity @ 23°C: | ≥ 2 x $10^{12}$ | Ohm-cm |
| Dielectric Constant (1KHz): | 2.83 | |
| Dissipation Factor (1KHz): | 0.011 | |

| OPTICAL PROPERTIES @ 23°C: | | |
|---|---|---|
| Spectral Transmission: | ≥ 98% @ 800-1640 | nm |
| Refractive Index: | 1.5728 @589 | nm |

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## EPO-TEK® OD2002 Advantages & Suggested Application Notes:

- Highly autoclave resistant; bonded devices rated to 1000 autoclave cycles.
- Suggested Applications:
  - Fiber Optic: fiber terminations to ferrules
  - Optoelectronics packaging
  - Hybrids: lid sealing with near hermetic leak rate