



**Manufacturer: Epoxy Technology** 

**Product Name:** EPO-TEK® OE138 Thixotropic High Temperature Epoxy, Heat Cure (2.5g)

Manufacturer Part Number: ETOE138-2.5G

Part B: 1.02

Click here for more details on the EPO-TEK® OE138 Thixotropic High Temperature Epoxy, Heat Cure (2.5g)



Date: Rev: No. of Components: Mix Ratio by Weight: Specific Gravity: Pot Life: Shelf Life- Bulk: Shelf Life- Syringe:

**EPO-TEK® OE138 Technical Data Sheet** For Reference Only High Temperature Thixotropic Epoxy

Recommended Cure: 150°C / 1 Hour

Minimum Alternative Cure(s): May not achieve performance properties below 150°C / 2 Minutes 80°C / 30 Minutes

NOTES:

Container(s) should be kept closed when not in use.

Filled systems should be stirred thoroughly before mixing and prior to use.

VII

Two

10:1

2 Hours

October 2022

Part A: 1.06

Six months at -40°C

• 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
TOTAL MASS SHOULD NOT EXCEED 50 GRAMS

One year at room temperature

Product Description: EPO-TEK® OE138 is a two component epoxy with intermediate viscosity range between EPO-TEK®353ND and EPO-TEK® 353ND-T. It is designed for semiconductor glob top applications, as well as use in medical and fiber optic industries.

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:            | Part A: Tan            |       | 3: Amber   |  |
| * Consistency:                          | Smooth             | n, pourable p          | aste  |  |  |
| * Viscosity (23°C) @ 20 rpm:            | 4,                 | 000 - 7,000            | cPs   |  |  |
| Thixotropic Index:                      |                    | 1.3                    |       |  |  |
| * Glass Transition Temp:                |                    | ≥ 90                   |       | namic Cure: 20-200°C/ISO 25 Min; Ramp -10-200°C @20°C/Min) |  |
| Coefficient of Thermal Expansion (CTE): |                    |                        |       |  |  |
| Below Tg                                | :                  | 21                     |       | in/in°C  |  |
| Above Tg                                | :                  | 128                    |       | x 10 <sup>-6</sup> in/in°C                                 |  |
| Shore D Hardness:                       |                    | 85                     |       |  |  |
| Lap Shear @ 23°C:                       |                    | > 2,000                | psi   |  |  |
| Die Shear @ 23°C:                       |                    | ≥ 20                   | Kg    | 7,112 psi  |  |
| Degradation Temp:                       |                    | 406                    | °C    |  |  |
| Weight Loss:                            |                    |                        |       |  |  |
| @ 200°C                                 | :                  | 0.18                   | %     |  |  |
| @ 250°C                                 | :                  | 0.60                   | %     |  |  |
| @ 300°C                                 | :                  | 1.40                   | %     |  |  |
| Suggested Operating Temperature: < 300  |                    | °C (Intermittent)      |       |  |  |
| Storage Modulus:                        |                    | 392,573                | psi   |  |  |
| Ion Content                             | CI:                | 334 ppm                | Na*:  | 494 ppm  |  |
|   | NH4 <sup>+</sup> : | 4 ppm                  | K⁺:   | ND   |  |
| * Particle Size:                        |                    | < 20                   | micro | ns   |  |
| ELECTRICAL AND THERMAL PROPER           | TIES:              |                        |       |  |  |
| Thermal Conductivity:                   |                    | N/A                    |       |  |  |
| Volume Resistivity @ 23°C:              |                    | ≥ 9 x 10 <sup>12</sup> |       | cm   |  |
| Dielectric Constant (1KHz):             |                    | 3.18                   |       |  |  |
| Dissipation Factor (1KHz):              |                    | 0.003                  |       |  |  |

Epoxies 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.

Contact the professionals at Fiber Optic Center for a quote or to get more details.

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## EPO-TEK<sup>®</sup> OE138 Advantages & Suggested Application Notes:

- Suitable for circuit assembly applications such as stacking SMDs, bonding ferrites cores, bonding inductor coils and power devices
- Used in chip on Board Globtops for encapsulation and environmental protection
- High temperature adhesive for hybrids and down hole sensors which can resist up to 300 C for extended periods of time
- Can be applied by screen printing, spatula, automatic dispenser or by hand
- Recommended for bonding metals, glass, ceramic, and many types of plastic
- OE138 changes to a dark amber color when properly cured for easy visual inspection

Epoxies 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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