

## TECHSIL® EP25676 GREY

Techsil® EP25676 Grey is a two part thermally conductive epoxy resin system with a low mix viscosity. The mixed system has a long pot life and can be cured at ambient or elevated temperatures. The flexibility of the resin and the very high filler loading make this system ideal for applications where temperature cycling and thermal stresses are encountered.

Techsil® EP25676 epoxy system provides state of the art thermal conductivity of over 1.3 W/m/OK from a liquid resin with a mix viscosity of 20 poise. The long (90 minutes) pot life allows users to further reduce this initial viscosity (to 1 – 2 poise) prior to use, by warming the resin. The penetration and wetting of substrates with this high thermally conductivity mix has allowed component manufacturers worldwide to push on the performance boundaries of their designs. Techsil® EP25676 epoxy resin system further provides outstanding electrical properties (e.g. 15 kV electric strength), very high flame retardancy, low cure shrinkage and thermal expansion coefficient (0.3% and 30 ppm/OC respectively).

### Features:

- Very high thermal conductivity
- Ambient or elevated temperature dispensing and curing
- Contains no halogens and is non-toxic
- Low stress on components

### Applications:

- Assemblies
- Power Supplies
- Modules
- Drivers

### Typical Properties of Uncured Material

| Property         | Base            | Hardener    | Mixed System           |
|------------------|-----------------|-------------|------------------------|
| Viscosity        | 15,000 – 30,000 | 100         | 2000-4000              |
| Colour           | Grey            | Clear       | Grey                   |
| Specific Gravity | 2.24 – 2.28     | 0.92 – 0.94 | 2.09 – 2.12            |
| Mix Ratio        | 18<br>7.2       | 1<br>1      | By weight<br>By volume |

|               |            |              |
|---------------|------------|--------------|
| Pot Life      | 90 minutes | 150gm @ 23°C |
| Gel Time      | 6 hours    | 150gm @ 23°C |
| Peak Exotherm | +10°C      | 150gm @ 23°C |
| Complete Cure | 24 hours   | 150gm @ 23°C |

### Contact Details

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**Typical Cured Properties:**

| Property                 | Result           | Units         |
|--------------------------|------------------|---------------|
| Operating Temperature    | -40 to + 180     | °C Continuous |
| Hardness                 | Shore D          | 76            |
| Electric Strength        | 76               | kV/mm         |
| Thermal Conductivity     | 1.3              | W/m°K         |
| Volume Resistivity       | 10 <sup>14</sup> | Ohm-cm        |
| Cure Shrinkage           | 0.3              | % (volume)    |
| Flammability             | To UL94V0 Level  | Not certified |
| Deflection Temperature   | 70               | °C            |
| Coefficient of Expansion | 30               | ppm/°C        |

Note: The above technical information and data should be considered representative or typical only and should not be used for specification purposes.

**Supply:**

Twinpacks: Ideal for mixing without the entrapment of air

Kits: The resin base and hardener are supplied in two separate containers, pre-weighed to facilitate accurate mixing for larger applications

Bulk: Techsil® EP25676 Grey system is formulated to prevent sedimentation on storage. However, storage at higher ambient temperatures (above 25 OC for instance) or for long times, can cause some settlement. It is important that any sediment is redispersed into the bulk resin prior to using the resin. This can be done by stirring with a long spatula.

Shelf Life: The materials should be stored in the original unopened containers under cool dry conditions at temperatures between 10 and 25 OC. The shelf life is one year. Opened containers should be resealed.

**DISCLAIMER**

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any other process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy themselves as to the suitability of such information for their particular use.

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