

Epoxies, Ect. 50-3182 NC (Cat. 30)

Epoxy; Epoxide

Epoxies, Etc.

Message:

50-3182 NC is a highly filled epoxy system with excellent physical, electrical, and thermal properties. 50-3182 NC offers very high thermal conductivity, excellent electrical insulation, and low thermal expansion. This unique combination of properties makes this system ideal for applications where electrical insulation and mechanical protection must be maintained while transferring heat.

Applications:

50-3182 NC is ideal for high voltage applications such as power supplies, transformers, high voltage insulators, bushings, etc...

| General Information | | |
|--------------------------------|-------------------------|-------------------|
| Features | Electrically Insulating | |
| | Low Viscosity | |
| | Thermally Conductive | |
| Uses | Bushings | |
| | High Voltage Insulation | |
| Physical | Nominal Value | Unit |
| Molding Shrinkage - Flow | 0.10 | % |
| Mechanical | Nominal Value | Unit |
| Flexural Strength | 93.1 | MPa |
| Impact | Nominal Value | Unit |
| Notched Izod Impact | 19 | J/m |
| Thermal | Nominal Value | Unit |
| CLTE - Flow | 3.0E-5 | cm/cm/°C |
| Thermal Conductivity | 1.7 | W/m/K |
| Heat Distortion | 175 | °C |
| Operating Temperature | -55.0 to 205 | °C |
| Thermoset | Nominal Value | Unit |
| Thermoset Mix Viscosity (25°C) | 45000 | cP |
| Uncured Properties | Nominal Value | Unit |
| Mix Ratio by Weight (PBW) | | |
| Part A | 100 | |
| Part B | 6.5 | |
| Density ¹ (25°C) | 2.29 | g/cm ³ |
| Curing Time | | |
| 100°C | 2.0 to 3.0 | hr |
| 85°C | 3.0 to 4.0 | hr |
| Cured Properties | Nominal Value | Unit |
| Water Absorption ² | 0.11 | % |

| | | |
|-------------------------------|--------------|---------|
| Shore Hardness (Shore D) | 95 | |
| Tensile Modulus | 10300 | MPa |
| Tensile Strength | 58.6 | MPa |
| Compression Strength | 117 | MPa |
| Electric Strength | 22 | kV/mm |
| Relative Permittivity (60 Hz) | 6.40 | |
| Volume Resistivity | 4.9E+16 | ohms·cm |
| Dissipation Factor (60 Hz) | 0.018 | |
| NOTE | | |
| 1. | Mixed | |
| 2. | After 7 days | |

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