

INSULGEL 70 CC FR NS

Epoxy; Epoxide
ITW Polymers Coatings North America

Message:

INSULGEL 70 CC FR NS is an epoxy compound which exhibits superior thermal shock resistance by making use of an inherently flexible epoxy resin and special filler technology. It provides reduced shrinkage and low coefficient of thermal expansion resulting in decreased stress and improved adhesion. In addition, a significant portion of the product is manufactured from environmentally sustainable raw materials. INSULGEL 70 CC FR NS is UL recognized under file E86165 & meets the flammability requirement of 94 V-0.

| General Information | | | |
|------------------------------|-------------------------------|-------------|-------------|
| Filler / Reinforcement | Filler | | |
| Features | Flame Retardant | | |
| | Good Thermal Shock Resistance | | |
| | Renewable Resource Content | | |
| UL File Number | E86165 | | |
| Forms | Gel | | |
| Hardness | Nominal Value | Test Method | |
| Durometer Hardness (Shore D) | 50 | ASTM D2240 | |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength | 8.27 | MPa | ASTM D638 |
| Tensile Elongation (Break) | 90 | % | ASTM D638 |
| Thermal | Nominal Value | Unit | |
| Glass Transition Temperature | 4.00 to 9.00 | °C | |
| CLTE - Flow | 9.0E-5 | cm/cm/°C | |
| Thermal Conductivity | 0.52 | W/m/K | |
| Service Temperature | -40 to 105 | °C | |
| Electrical | Nominal Value | Unit | Test Method |
| Volume Resistivity | | | ASTM D257 |
| 25°C | 7.0E+12 | ohms · cm | |
| 100°C | 1.0E+10 | ohms · cm | |
| Dielectric Strength | 16 | kV/mm | ASTM D149 |
| Dielectric Constant (1 kHz) | 4.10 | | ASTM D150 |
| Dissipation Factor (1 kHz) | 0.080 | | ASTM D150 |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating | V-0 | | UL 94 |
| Thermoset | Nominal Value | Unit | Test Method |
| Thermoset Components | | | |
| Part A | Mix Ratio by Weight: 100 | | |
| Part B | Mix Ratio by Weight: 10 to 11 | | |
| Shelf Life (25°C) | 52 | wk | |

| Uncured Properties | Nominal Value | Unit | Test Method |
|------------------------------|---------------|-------------------|-------------|
| Color | | | |
| -- 1 | Amber | | |
| -- 2 | Black | | |
| Density | | | |
| -- 3 | 0.978 | g/cm ³ | |
| -- 4 | 1.61 | g/cm ³ | |
| Viscosity | | | ASTM D2393 |
| 25°C ⁵ | 0.13 | Pa·s | |
| -- 6 | 3.0 | Pa·s | |
| 25°C ⁷ | 16 | Pa·s | |
| Curing Time (25°C) | 16 to 24 | hr | |
| Pot Life ⁸ (25°C) | 30 to 45 | min | |
| NOTE | | | |
| 1. | Part B | | |
| 2. | Part A | | |
| 3. | Part B | | |
| 4. | Part A | | |
| 5. | Part B | | |
| 6. | Mixed | | |
| 7. | Part A | | |
| 8. | 100 gram mass | | |

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