



Silicone & Epoxy Technology

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Set-Cast 1-140MTFR/111B

Set-Cast 1-140 MTFR is an epoxy casting with high thermal conductivity. Class F specification can be met by using Set-Cure 111B. Set-Cast 1-140MTFR is UL 94VO approved.

| Properties-Uncured: | 1-140MTFR | Set-Cure 111B |
|--|------------------|----------------------|
| Color, Visual | Black | Amber |
| Viscosity, cps @ 175°F (spindle 5, speed 7) | 176,000 | 700 |
| Mixed Viscosity, cps @ 175°F (spindle 5, speed 7) | 56,000 | |
| Specific Gravity | 2.60 | 0.97 |
| Mix Ratio, by weight | 100:3.5 | |
| Pot Life @25°C, hours | 2.5 | |
| Shelf Life @25°, months | 6 | |
| An UL 94 VO requirement | Passes | |

Physical Properties-Cured:

| | |
|--|-----------------------|
| Durometer (Shore D) | 90 |
| Tensile Strength, psi | 8000 |
| Tensile Elongation, % | <1.0 |
| Coefficient of Thermal Expansion, °C | 26 X 10 ⁻⁶ |
| Thermal Conductivity, BTU-in(ft ²)(hr)(°F) | 22 |
| Service Temperature, °C | -55 to 155 |
| Compressive Strength, psi | 17,000 |
| Flexural Strength, psi | 14,000 |
| Heat Distortion Point, °C | 155 |
| Modulus Elasticity | |

Electrical:

| | |
|--------------------------------|------------------------|
| Dielectric Strength, volts/Mil | 425 |
| Dielectric Constant, 60hz | 6.3 |
| Dissipation Factor, 60hz | 0.015 |
| Volume Resistivity, ohm-cm | 1.0 X 10 ¹⁵ |

See back of Data Sheet for Warranty Information

Set Cast 1-140 MTFR ~page 2~

Mixing Instruction:

1. Pre-mix both components in their original containers to insure consistency.
2. Pre-heat both components to 100°F, to lower viscosity for ease of mixing.
3. Measure out parts (by weight) of both components.
4. Mix thoroughly, scraping the sides and bottom of container
5. Evacuate @29in. Hg for void-free casting.
6. Pour into unit or cavity.

Cure Schedule. Heat is required in order to cure the material:

Fast Cure, 2 hours @ 120°C.

Small mass, 95 °C for 2-3 hours plus 1 hour @ 120°C.

Large Mass, greater than 5 lbs, cure @ 65 °C for 4 hours plus 2 hours @120 °C.

To maximize temperature post cure S.E.T 1-140MTFR for 4 hours at 150°C for service temperatures above 150 °C.

Warranty

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