

Technical Data Sheet

Secondary Insulation

RanVar™ TSR-150

Single-Component Epoxy Resin

RanVar™ TSR-150 Resin

Product Description

RanVar™ TSR-150 is a filled, single-component, heat-cured, epoxy resin.

Areas of Application

Wet winding

General adhesive, patching and sealing usage

Features and Benefits

- Non-flowing during cure
- Exceptional heat transfer
- Excellent electrical properties
- Suitable for high voltage applications
- Thermal shock resistant
- High bond strength

Application Methods

- Brush
- Spatula
- Automatic wet winding equipment

Transportation / Storage

Store below 25°C / 77°F in a dry controlled environment out of direct sunlight. This material should be suitable for use stored under these conditions in the original sealed containers for three (3) months from the date of shipment.

Usable life may be extended by refrigerated storage at 5°C / 41°F.

Avoid long term storage above 15°C / 60°F.

Mix thoroughly before use.

Health / Safety

Refer to the Material Safety Data Sheet.

Typical Properties of Material as Supplied

| Property | Conditions | Value | Units |
|--------------------|---------------|-------------------|----------|
| Viscosity – 2 rpm | 25°C / 77°F | 250,000 – 350,000 | cP |
| Viscosity – 20 rpm | 25°C / 77°F | 70,000 – 100,000 | cP |
| Gel Time | 150°C / 302°F | 8 – 15 | minutes |
| Weight per Gallon | 25°C / 77°F | 11.6 – 11.9 | pounds |
| Flash Point | ASTM D93 | > 94 > 201 | °C °F |

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Curing Schedule

For rotating equipment:
Cure for 8 hours at 150°C / 302°F.

For stationary equipment and adhesive applications:
Cure for 2 hours at 150°C / 302°F or 6 hours at 135°C / 275°F

Curing schedule is based on time after unit reaches specified temperature

Typical Mechanical Properties (Specimens cured 8 hours at 150°C / 302°F)

| Property | Conditions | Value | Units |
|-----------------------|--------------------------|--------|-------|
| Hardness | Shore D – 25°C / 77°F | 88 | |
| Tensile Strength | 25°C / 77°F | 12,500 | psi |
| Elongation | 25°C / 77°F | 2.5 | % |
| Flexural Strength | 25°C / 77°F | 13,200 | psi |
| Heat Deflection Temp. | | 155 | °C |
| Weight Loss | 24 hours @ 180°C / 356°F | 2 | % |

Typical Electrical Properties (Specimens cured 8 hours at 150°C / 302°F)

| Property | Conditions | Value | Units |
|---------------------|---------------------------|------------------------|--------|
| Dissipation Factor | 60 Hz – 100°C / 212°F | 0.015 | |
| Dielectric Constant | 60 Hz – 100°C / 212°F | 4.3 | |
| Volume Resistivity | ASTM D257 – 100°C / 212°F | 5.8 x 10 ¹³ | ohm-cm |

The above properties are typical values and are not intended for specification use.

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