

# PRODUCT DATA SHEET



TENCATE ADVANCED COMPOSITES

## RS-50

### PRODUCT TYPE

350°F (177°C) Curing Epoxy RTM Resin

### PRODUCT FORMS

Resin

### SHELF LIFE

#### Pot Life

4 hours @ 200°F (93°C), 270 cps

#### Frozen Storage Life

12 months @ <0°F (-18°C)

### PRODUCT DESCRIPTION

RS-50 is a toughened low viscosity epoxy RTM resin. It features a long four hour pot life and a low minimum viscosity for excellent RTM and VARTM processing. It can also be used in wet winding applications.

### PRODUCT BENEFITS/FEATURES

- One Part Resin System
- Low Minimum Viscosity of 23 cps
- Long 4 Hour Pot Life
- High Hot/Wet Tg of 388°F (189°C)
- 2 Hour Cure Cycle
- Low 190°-200°F (88°-99°C) Injection Temperature

### NEAT RESIN PHYSICAL PROPERTIES

Density .....	1.16 g/cc
Tg (Dry).....	397°F (203°C)
Tg (Wet).....	388°F (197°C)
Minimum Resin Viscosity .....	23 cps (by DMA, 4°F/min; 2°C/min ramp rate)
Moisture Absorption.....	2.1% (after 48 hour water boil)
Resin Viscosity	
180°F (82°C).....	365 cps
200°F (93°C).....	193 cps
250°F (121°C).....	56 cps
Gel Time (at 350°F/177°C).....	32 minutes

### NEAT RESIN PHYSICAL PROPERTIES

Fracture Toughness .....	186 J/m <sup>2</sup> (G1C)
Flexural Strength.....	21 ksi (145 MPa)
Flexural Modulus .....	0.58 Msi (4.0 GPa)
Tensile Strength.....	11 ksi (76 MPa)
Tensile Modulus.....	0.52 Msi (3.7 GPa)

### LAMINATE DATA USED T300, 5HS FABRIC, 370 GSM FAW.

Properties	Condition	Method	Results	
Flexural Strength 0°	RTD	ASTM D7264	135 ksi	930.8 MPa
Flexural Modulus 0°	RTD	ASTM D7264	8.5 Msi	58.6 GPa
Open Hole Comp. Strength*	RTD	ASTM D6484	40 ksi	275.8 MPa
Open Hole Comp. Strength*	ETD	ASTM D6484	32.3 ksi	222.7 MPa
Short Beam Shear Strength	RTD	ASTM D2344	10.5 ksi	72.4 MPa
CAI*	RTD	ASTM D7136/7137	34.8 ksi	239.9 MPa

\* 3rd Party Generated Data  
ETD: 220°F (104°C)

### TYPICAL CURE PARAMETERS

2 hours at 350°F/177°C

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All data given is based on representative samples of the materials in question. Since the method and circumstances under which these materials are processed and tested are key to their performance, and TenCate Advanced Composites has no assurance of how its customers will use the material, the corporation cannot guarantee these properties.

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