

TECHNICAL DATA



TENCATE ADVANCED COMPOSITES

TC210 Resin System

PRODUCT TYPE

250°F (121°C) Cure
Toughened Epoxy Resin System

TYPICAL APPLICATIONS

- Recreational & Marine Composites
- Shafts & Tube Structure
- High-end Industrial & Medical Applications

SHELF LIFE

30 days @ 75°F (24°C)
12 months @ < 0°F (-18°C)

ROBUST CURE PROCESSES

- Autoclave press >30 psi
Ramp 5-20°F/3-11°C per minute to 250-300°F/121-149°C for 60 minutes or longer
- Shrink-wrap
- Compression molding
- Vacuum bag

FORMS

- Unitape to 36" width
- Carbon or glass fabrics from 38" - 60" inches
- Slit tapes

Revised 02/2015

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 USA, Inc. has no assurance of how its customers will use the material, the corporation cannot guarantee these properties.

Page 1 of 1

TC210_DS_021915

PRODUCT DESCRIPTION

TC210 is TenCate's newest prepreg designed for value-oriented applications such as high-end recreational, medical and industrial applications. TC210 offers an excellent balance of toughness and mechanical properties. It can be easily processed, autoclave or press curing operations. TC210 utilizes precision resin casting for high degrees of resin content consistency across the prepreg web.

TC210 is available with virtually all fiber reinforcements (glass, Kevlar, graphite) in unidirectional tape, slit unidirectional tape, fabric prepreps.

TC210 PRODUCT BENEFITS

- Excellent mechanical properties
- Cure schedule of 60-120 minutes
- Good toughness for impact resistance
- Low laminate void content with pressure curing
- Very tight resin content control $\pm 2\%$
- Moderate tack for easy handling, controlled flow
- Excellent in roll wrapping applications
- Easy processing for consistent performance
- Long outtime at ambient temperature

TYPICAL NEAT RESIN PROPERTIES

250°F (121°C Cure) Dry Tg 260°F (128°C)
Gel Time 6-10 minutes
Density 1.2 g/cc

PREPREG PROPERTIES	Target	Standard Dev	CoV
Resin Content Control	$\pm 2\%$	@ 1%	1-3%
Areal Weight	± 5 gms	@ 1-2%	1-2%
Flow	> 10%	@ 13-15%	n/m



MECHANICAL PROPERTIES ⁽¹⁾

Property	Fiber	Test Method	Result
Tensile Strength 0°	G34-700 150 gsm Unitape*	ASTM D3039	336 ksi (2321 MPa)
Tensile Modulus 0°	G34-700 150 gsm Unitape*	ASTM D3039	18.8 Msi (129.9 GPa)
Tensile Strength 0°	TR50 125 gsm Unitape	ASTM D3039	338.7 ksi (2340 MPa)
Tensile Modulus 0°	TR50 125 gsm Unitape	ASTM D3039	18.1 Msi (125.0 GPa)
Tensile Strength 0°	TR50 118 gsm Unitape	ASTM D3039	330 ksi (2280 MPa)
Tensile Modulus 0°	TR50 118 gsm Unitape	ASTM D3039	17.7 Msi (122.3 GPa)

* Normalized to 60% Fiber Volume

G34-700 12K and TR50 15K from Grafal.

⁽¹⁾ 10 ply laminate cured under vacuum pressure, 90 minutes at 280°F/138°C

TENCATE ADVANCED COMPOSITES

18410 Butterfield Blvd.
Morgan Hill, CA 95037 USA
Tel: +1 408 776 0700
Fax: +1 408 776 0107

2450 Cordelia Road
Fairfield, CA 94534 USA
Tel: +1 707 359 3400
Fax: +1 707 359 3495

Amber Drive, Langley Mill
Nottingham, NG16 4BE UK
Tel: +44 (0)1773 530899
Fax: +44 (0)1773 768687

G. van der Muelenweg 2
7443 PV Nijverdal NL
Tel: +31 548 633 933
Fax: +31 548 633 299

www.tencate.com
www.tencateadvancedcomposites.com
www.tencateindustrialcomposites.com
info@tcac-usa.com (USA)
advancedcomposites.europe@tencate.com (Europe)