

DESCRIPTION

TenCate TC264-1 is a flame retardant epoxy prepreg that has been developed for oven cure composite fabrication processes utilizing either expendable or reusable lay-up mandrels. This epoxy-based prepreg system is ideal for use in applications where flame retardency is needed such as air management system ducting, decorative enclosures and fire retardent composite panel assemblies.

FEATURES

- › **Meets 12 and 60-second vertical burn**
- › **Offered on aramid or glass fabrics**
- › **Ideal for both sandwich and/or solid laminate construction**
- › **Offered with one-side or two-sided tack**

PRODUCT TYPE

127°C (260°F) Cure, Fire Retardant Epoxy Prepreg

TYPICAL APPLICATIONS

- › Aircraft Interiors
- › Flame resistant composite structure
- › Armor

SHELF LIFE

Tack Life:	Up to 30 days at ambient
Out Life:	Up to 30 days at ambient
Frozen Storage Life:	12 months at -18°C (<0°F)

Tack life is the time during which the prepreg retains enough tack, drape, and handling for easy component lay-up.

Out life is the maximum time allowed at ambient temperature before cure.* Ambient is 18–22°C (65–72°F)

** Out life tested by SBS on 8 ply 15 x 15 cm (6 x 6") laminate. Users may need to separately evaluate out life limits on thicker, more complex parts.*

NEAT RESIN PROPERTIES

T _g dry with 118°C (245°F), 90-minute cure	122°C (251°F)
T _g dry with 127°C (260°F), 90-minute cure	124°C (255°F)
Gel Time	5–8 min
Volatiles	2%



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MECHANICAL PROPERTIES

Properties	Condition	Method	Results (a)		Results (b)	
Tensile Strength 0°	RTD	ASTM D638	74 ksi	513 MPa	77 ksi	530 MPa
Tensile Modulus 0°	RTD	ASTM D638	4.2 Msi	28.6 GPa	4.3 Msi	29.6 GPa
Compressive Strength 0°	RTD	ASTM D695	27 ksi	186 MPa	27 ksi	184 MPa
Compressive Modulus 0°	RTD	ASTM D695	3.8 Msi	26.2 GPa	3.8 Msi	26.2 GPa
Flexural Strength 0°	RTD	ASTM D790	56 ksi	389 MPa	58 ksi	401 MPa
Flexural Modulus 0°	RTD	ASTM D790	2.8 Msi	19.3 GPa	2.9 Msi	20.0 GPa
Flexural Strength 0°	ETD	ASTM D790	23 ksi	157 MPa	-	-
Flexural Modulus 0°	ETD	ASTM D790	1.4 Msi	9.7 GPa	-	-
Flexural Strength 0°/90°	RTD	ASTM D790	54 ksi	370 MPa	54 ksi	372 MPa
Flexural Modulus 0°/90°	RTD	ASTM D790	3.0 Msi	20.3 GPa	3.1 Msi	21.4 GPa
Flexural Strength 0°/90°	ETD	ASTM D790	19 ksi	130 MPa	16 ksi	110 MPa
Flexural Modulus 0°/90°	ETD	ASTM D790	1.1 Msi	7.6 GPa	0.9 Msi	6.2 GPa
SBS(ksi)	RTD	ASTM D2344	6.2 ksi	43 MPa	6.3 ksi	43 MPa

(a) Laminate data used Style 285 Kevlar fabric, 170 faw, 54% resin content. Cured 90 minutes at 118°C (245°F).

(b) Laminate data used Style 285 Kevlar fabric, 170 faw, 54% resin content. Cured 90 minutes at 127°C (260°F).

ETD = 149°C (300°F)

MECHANICAL PROPERTIES

Properties	Condition	Method	Results	
Drum Peel Strength	RTD	-	3728 mm-N/76 mm	33 in-lb/3-inch width
Long Beam Flexure-Ultimate	RTD	-	28.6 GPa	135 lbf

Sandwich panel data using BMS8-124 3 pcf (0.05 g/cc) density core, 12.7 mm thick (0.5 inches).

FLAMABILITY DATA

12-Second Vertical Burn		30-Second 45° Burn	
Self extinguish time	1 sec	Self-extinguish time	0 sec
Burn length	30.5 mm (1.2 in)	Afterglow cease time	0 sec
Drip extinguish time	0 sec	Drip extinguish time	None
60 Second Vertical Burn			
Self extinguish time	0 sec		
Burn length	94 mm (3.7 in)		
Drip extinguish time	0 sec		

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