

## PRODUCT DATA SHEET

### DESCRIPTION

Toray 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 12–60-second vertical burn
- ▶ Offered on aramid or glass fabrics
- ▶ Ideal for both sandwich and/or solid laminate construction
- ▶ Offered with one-sided 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

**Out Life:** Up to 30 days at ambient

**Frozen Storage Life:** 12 months at -18°C (< 0°F)

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.*

### TYPICAL NEAT RESIN PROPERTIES

T <sub>g</sub> Dry with 118°C (245°F), 90 min cure	122°C (251°F)
T <sub>g</sub> Dry with 127°C (260°F), 90 min cure	124°C (255°F)
Gel Time	5–8 min
Volatiles	2%



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### MECHANICAL PROPERTIES

Property	Condition	Method	Results (a)		Results (b)	
Tensile Strength 0°	RTD	ASTM D 638	513 MPa	74 ksi	530 MPa	77 ksi
Tensile Modulus 0°	RTD	ASTM D 638	28.6 GPa	4.2 Msi	29.6 GPa	4.3 Msi
Compressive Strength 0°	RTD	ASTM D 695	186 MPa	27 ksi	184 MPa	27 ksi
Compressive Modulus 0°	RTD	ASTM D 695	26.2 GPa	3.8 Msi	26.2 GPa	3.8 Msi
Flexural Strength 0°	RTD	ASTM D 790	389 MPa	56 ksi	401 MPa	58 ksi
Flexural Modulus 0°	RTD	ASTM D 790	19.3 GPa	2.8 Msi	20.0 GPa	2.9 Msi
Flexural Strength 0°	ETD	ASTM D 790	157 MPa	23 ksi	-	-
Flexural Modulus 0°	ETD	ASTM D 790	9.7 GPa	1.4 Msi	-	-
Flexural Strength 0°/90°	RTD	ASTM D 790	370 MPa	54 ksi	372 MPa	54 ksi
Flexural Modulus 0°/90°	RTD	ASTM D 790	20.3 GPa	3.0 Msi	21.4 GPa	3.1 Msi
Flexural Strength 0°/90°	ETD	ASTM D 790	130 MPa	19 ksi	110 MPa	16 ksi
Flexural Modulus 0°/90°	ETD	ASTM D 790	7.6 GPa	1.1 Msi	6.2 GPa	0.9 Msi
SBS(ksi)	RTD	ASTM D 2344	43 MPa	6.2 ksi	43 MPa	6.3 ksi

(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

Property	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")

### 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")	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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