

# 1102



## 250-300°F (121-149°C) Cure Epoxy Film Adhesive

### Typical applications

Aerospace  
Sporting Goods  
Marine  
Wind Energy  
Industrial Manufacturing

### Out life

30 days at 70°F (21°C)

### Shelf life

3 months at 40°F (4°C)  
6 months at 0°F (-18°C)

### Description

1102 is a 250-300°F (121-149°C) cure, toughened, general purpose controlled flow epoxy prepreg designed for one-step assembly of fiber glass and Kevlar® faced sandwich panels. Versatile processing, excellent mechanical properties, and long out time make 1102 suitable for a variety of applications requiring high strengths.

### Benefits/features

- Toughened
- Self-adhesive prepreg
- Controlled resin flow
- Good tack and processability
- Excellent for sandwich structures and panels

### Application

1102 is well suited for structural and secondary applications in aerospace, sporting goods, radomes, marine, wind energy, and industrial manufacturing where good adhesion strength and toughness is required.

1102 can be supplied with most commercially available woven fabrics including:

- Carbon
- Quartz
- Aramid
- S-glass
- E-glass
- Other specialty fibers and fabrics

### Recommended processing conditions

1102 can be cured at temperatures from 250-300°F (121-149°C), depending on part size and complexity. Low, medium, and high pressure molding techniques may be used for curing. Recommended cure cycle is 25 psi (172 kPa), 3°F (1.7°C) /min. ramp to 275°F (135°C), hold for 60 minutes, cool to <140°F (60°C).



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## Neat Resin (values are average and do not constitute a specification)

Property	Measured Value
Gel Time @ 275°F (135°C), minutes	5 - 7
Specific Gravity	1.20
T <sub>g</sub> (DMA, E'), °C (°F)	105 (221)
CTE (ppm/°C)	60±10 (below T <sub>g</sub> )

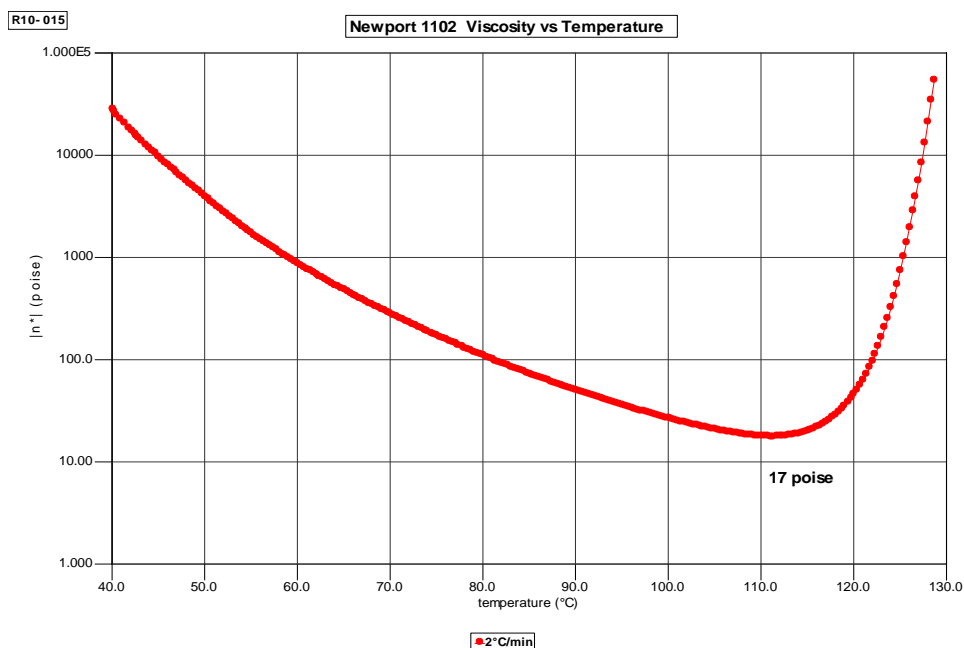
## Mechanical Data (values are average and do not constitute a specification)

MIL-A-25463 Type I, Class 2. NB101HC @ 0.060 psf, preheated press 275°F, 1 hour, 25 psi, normalized to 60%FV

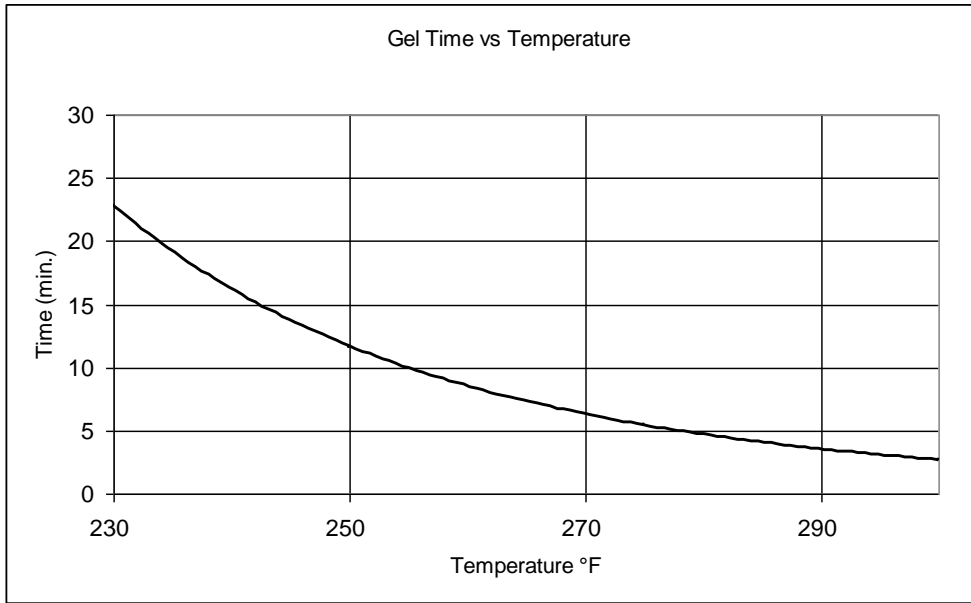
Property	Test Method	RT	180°F	140°F wet
0° Tensile Strength, ksi (MPa)	ASTM D3039	78.8 (543)	73.7 (508)	56.8 (391)
0° Tensile Modulus, Msi (GPa)		4.49 (30.9)	4.57 (31.5)	4.42 (30.4)
0° Compression Strength, ksi (MPa)	SACMA 1R-94	98.0 (675)	69.7 (480)	63.5 (437)
0° Flexural Strength, ksi (MPa)	ASTM D790	120 (827)	86.4 (595)	68.9 (475)
0° Flexural Modulus, Msi (GPa)		4.28 (29.5)	3.84 (26.4)	3.67 (25.3)
0° SBS Strength, ksi (MPa)	SACMA 8R-94	8.20 (56.5)	5.10 (35.1)	3.50 (24.1)

## Viscosity Profile

TA - AR2000 parallel plate rheometer



# Gel Curve



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