

# 350



## 350°F (177°C) Cure Epoxy Resin System

### Typical applications

Aerospace  
Industrial

### Out life

14 days at 70°F (21°C)

### Shelf life

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

### Description

350 is a 350°F (177°C) general purpose high temperature epoxy resin system. 350 is recommended for laminated parts that operate within the temperature range of -67°C to 350°F.

### Benefits/features

- Excellent mechanical properties
- High  $T_g$  (377°F)
- Flexible processing

### Application

350 can be supplied with most commercially available fibers (carbon, quartz, aramid, S-glass, E-glass, etc.) in both woven form (designated as NB) as well as unidirectional tape (designated as NCT). It can also be supplied with a lightweight supporting glass scrim or graphite mat on one side.

Woven fabrics are available in standard commercial widths up to 60 inches (1.5 m). Unitape widths up to 39 inches (1 m) are available in standard fiber weights ranging from 70 – 300 gsm (0.014 – 0.060 psf).

### Recommended processing conditions

350 is typically cured at 350°F (177°C). Low, medium, and high pressure molding techniques may be used for curing. Recommended cure cycle is 85 psi (586 kPa); 1-5°F (0.5-2.8°C)/min ramp to 350°F (177°C); hold for 120 minutes; cool to <140°F (60°C).

### Neat resin [values are average and do not constitute a specification]

Property	Value
Gel time @ 350°F (177°C), minutes	5
$T_g$ (DMA, E'), °F (°C)	377 (192)



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Technical Data Sheet

## Mechanical data [values are average and do not constitute a specification]

34-700, uni-carbon, 35% RC, autoclave cured, 85psi (vented at 20psi), 120 minutes at 350°F

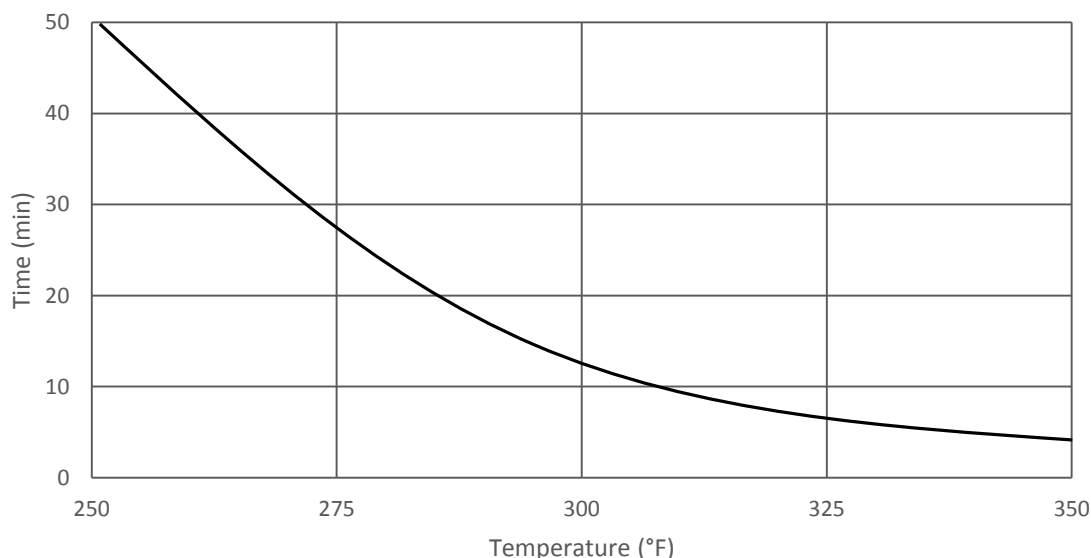
Property	-65°F (-54°C)	RT	160°F (71°C)	270°F (132°C)
0° Tensile strength, ksi (MPa)	303 (2090)	340 (2344)	335 (2310)	327 (2250)
0° Tensile modulus, Msi (GPa)	18.8 (130)	19 (131)	18.9 (130)	18.8 (130)
90° Tensile strength, ksi (MPa)	11 (76)	9.7 (67)	10 (69)	8.1 (56)
90° Tensile modulus, Msi (GPa)	1.51 (10.4)	1.40 (9.65)	1.30 (8.96)	1.11 (7.65)
0° Compressive strength, ksi (MPa)	258 (1780)	240 (1654)	227 (1570)	200 (1380)
0° Compressive modulus, Msi (GPa)	17.3 (119)	17.2 (119)	17.1 (118)	17.4 (120)
±45° In-plane shear, ksi (MPa)	24.1 (166)	22.1 (152)	24.6 (170)	23 (159)
Short beam shear strength, ksi (MPa)	22.8 (157)	16.9 (117)	13.9 (95.8)	9.39 (64.7)

3K70P, carbon fabric, 35% RC, press cured, 85psi, 120 minutes at 350°F

Property	-65°F (-54°C)	RT	160°F (71°C)	270°F (132°C)
0° Tensile strength, ksi (MPa)	89 (614)	112 (772)	106 (731)	100 (689)
0° Tensile modulus, Msi (GPa)	8.6 (59)	12 (83)	11 (76)	10 (69)
0° Compressive strength, ksi (MPa)	78 (538)	80 (552)	80 (552)	61 (421)
0° Compressive modulus, Msi (GPa)	9.8 (68)	8.7 (60)	8.5 (59)	8 (55)
Short beam shear strength – 30 plies, ksi (MPa)	9.8 (68)	8.9 (61)	8.4 (58)	6.7 (46)

## Gel curve

Gel time vs temperature



The information contained herein has been obtained under controlled laboratory conditions and are typical or average values and do not constitute a specification, guarantee, or warranty. Results may vary under different processing conditions or in combination with other materials. The data is believed to be reliable but all suggestions or recommendations for use are made without guarantee. You should thoroughly and independently evaluate materials for your planned application and determine suitability under your own processing conditions before commercialization. Furthermore, no suggestion for use or material supplied shall be considered a recommendation or inducement to violate any law or infringe any patent.

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