

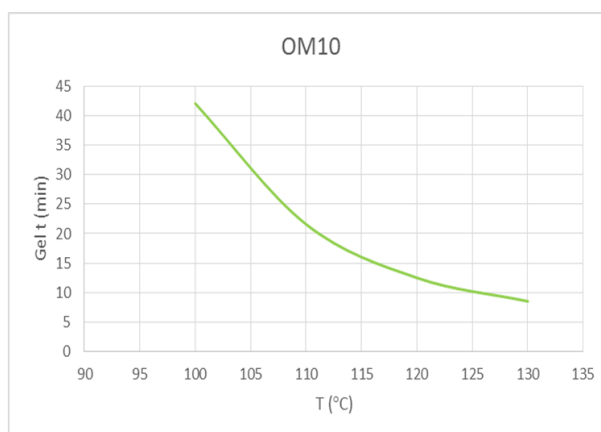
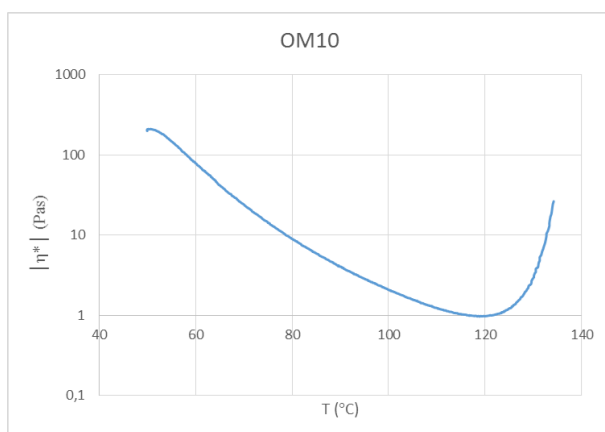
## TECHNICAL DATA SHEET

<b>Resin System</b>	OM10
<b>Applications</b>	Industrial composites, automotive
<b>Key Features</b>	Structural; white opaque when cured; tacky version is available
<b>Cure Temperature</b>	90°C - 140°C
<b>Work Life</b>	28 days @ RT
<b>Storage Life</b>	1 year @ -18°C
<b>Fiber</b>	Carbon, E-glass
<b>Weaving Style</b>	Plain, twill, UD
<b>Dry Fabric Areal Weight (gsm)</b>	110 - 600
<b>%Resin Content (by weight)</b>	35 - 48 ± 2

### Cured Matrix Properties

Cured Matrix Properties (cured at 120 °C 1h + 140 °C 2h)		
<b>Tensile Test (ISO 527-2)</b>	Tensile Strength (MPa)	36
	Young's modulus (GPa)	2.6
	Elongation at break (%)	2
	Shear modulus (MPa)	974
<b>Flexural Test (ISO 178)</b>	Flexural Strength (MPa)	120
	Flexural Modulus (GPa)	2.4
	Elongation at maximum (%)	6
<b>Tg (°C) (DMA)</b>	Onset of E'	≥130

### Resin Matrix Properties



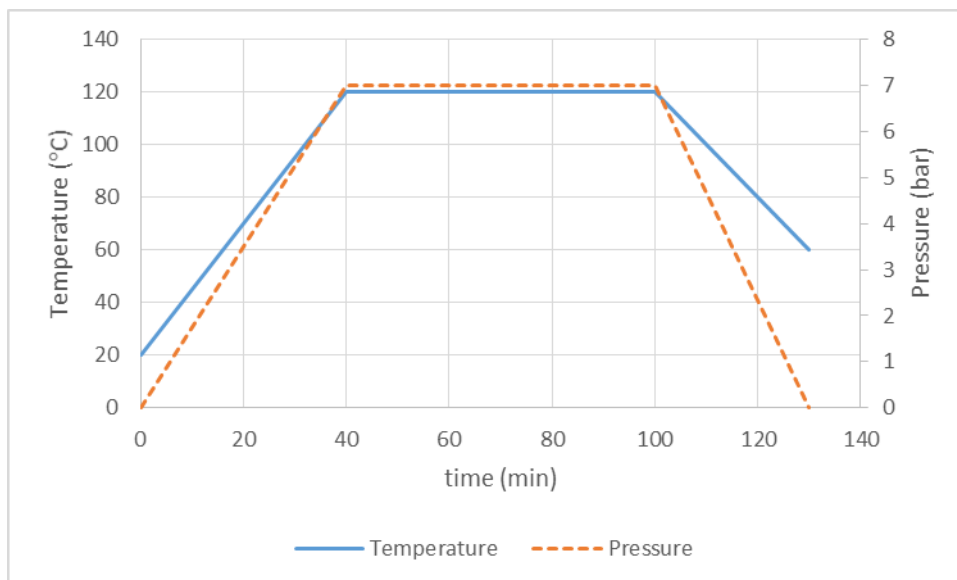
## Cure Profile

### Autoclave Molding

#### Recommended Curing Cycle at 120 °C

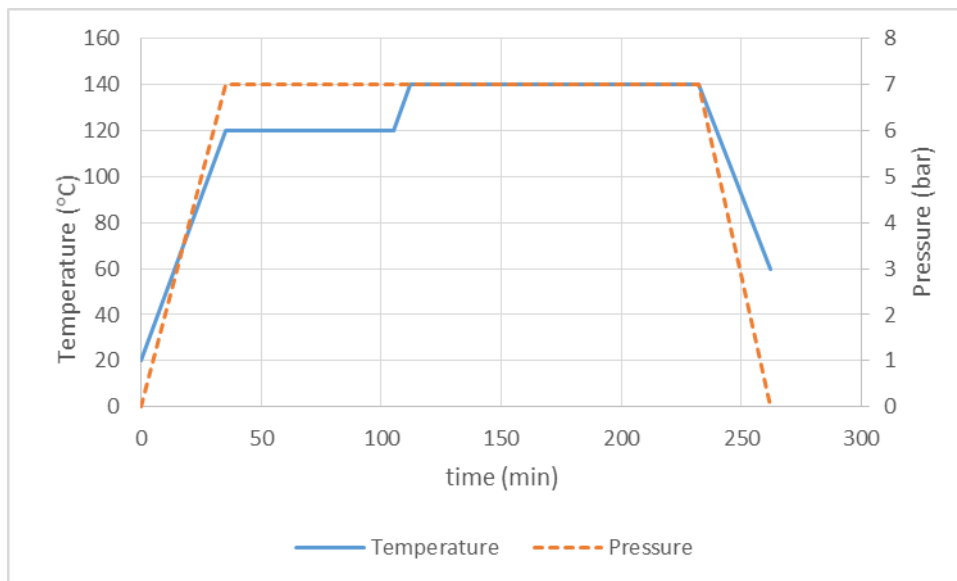
- 1) Apply full vacuum (1 bar).
- 2) Apply 7 bar gauge autoclave pressure.
- 3) Reduce the vacuum to a safety value of 0.2 bar when the autoclave pressure reaches approximately 1 bar gauge.
- 4) Heat-up at 1 – 3 °C/minute to 120°C.
- 5) Hold at 120°C 60 minutes ± 5 minutes.
- 6) Cool at 2 – 5 °C per minute.
- 7) Vent autoclave pressure when the component reaches 60°C or below.

\* A typical autoclave cure cycle for a thin laminate is 60 minutes at 120°C, but for a thick laminate the cure time may be extended to 2 hours at 120 °C.



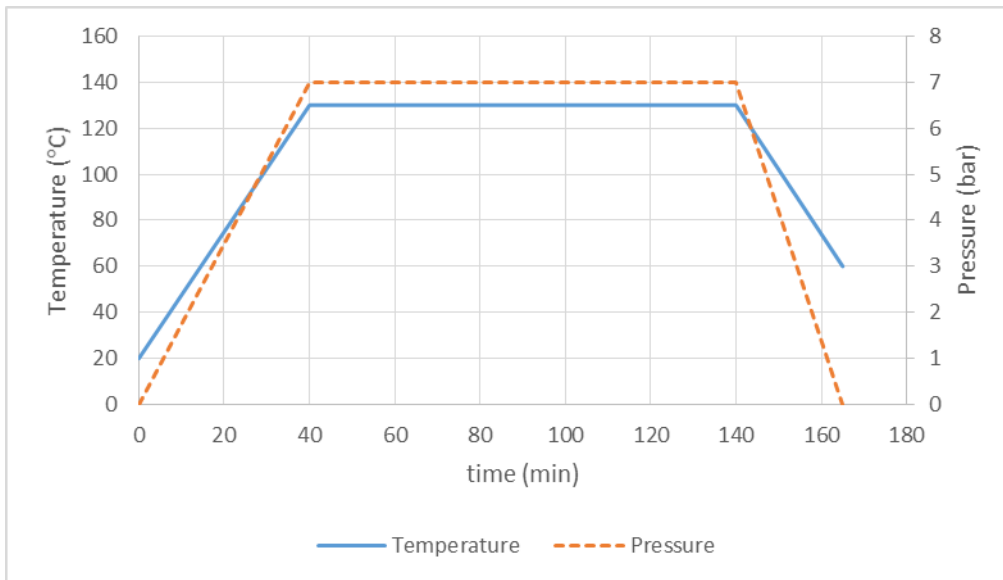
### Recommended Curing Cycle at 120 °C and 140 °C

- 1) Apply full vacuum (1 bar).
- 2) Apply 7 bar gauge autoclave pressure.
- 3) Reduce the vacuum to a safety value of 0.2 bar when the autoclave pressure reaches approximately 1 bar gauge.
- 4) Heat-up at 1 – 3 °C/minute to 120°C.
- 5) Hold at 120°C 60 minutes ± 5 minutes.
- 6) Heat-up at 1 – 3 °C/minute to 140 C.
- 7) Hold at 140 °C for 120 minutes.
- 8) Cool at 2 – 5 °C per minute.
- 9) Vent autoclave pressure when the component reaches 60°C or below.



### Recommended Curing Cycle at 130 °C

- 1) Apply full vacuum (1 bar).
- 2) Apply 7 bar gauge autoclave pressure.
- 3) Reduce the vacuum to a safety value of 0.2 bar when the autoclave pressure reaches approximately 1 bar gauge.
- 4) Heat-up at 1 – 3 °C/minute to 130°C.
- 5) Hold at 130°C for 100 minutes  $\pm$  5 minutes.
- 6) Cool at 2 – 5 °C per minute.
- 7) Vent autoclave pressure when the component reaches 60°C or below.



## Industrial CFRP Laminates (Autoclave Cured Laminate)

Fabric	Fiber	Prepreg Resin Content %
KCF3K TW200	Toray T300	42
KCF3K TW245	DowAksa A38	42
KCF12K UD300	DowAksa A49	38

Test	Standard	Property	KCF3K TW200	KCF3K TW245	KCF12K UD300
0° Tensile	ASTM D3039	Strength (MPa)	693	824	1672
		Modulus (GPa)	56	64	132
		Strain (%)	1.7	1.2	1.3
		Poisson's ratio	0.05	0.04	0.3
0° Compression	ASTM D3410	Strength (MPa)	598	675	652
		Modulus (GPa)	54	62	135
		Strain (%)	3.8	1.2	0.7
0° 4 Pt Bending	ASTM D7264	Strength (MPa)	731	883	1140
		Modulus (GPa)	69	80	188
		Strain (%)	1.1	1.2	0.7
0° ILSS	ASTM D2344	Strength (MPa)	71	73	73
V-notch shear	ASTM D5379	Strength (MPa)	x	81	76
DMA Tg	ASTM D7028	Tg (°C)	≥120	≥120	≥120

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