

TECHNICAL DATA SHEET

Resin System	CM14
Applications	Visual composites, Automotive
Key Features	Suitable for fast press molding Class A Surface quality Good chemical resistance Waterspot/whitespot resistant DICY free formulation Silica-free formulation with improved transparency
Cure Temperature	150°C - 180°C < 5 minutes
Work Life	2 weeks @ RT
Storage Life	6 months @ -18°C
Fiber	Carbon
Weaving Style	Plain, twill, UD
Dry Fabric Areal Weight (gsm)	200 - 600
%Resin Content (by weight)	35 - 48 ± 2
Tackiness Level	Low Tack
Tack Life	5 Days @ RT

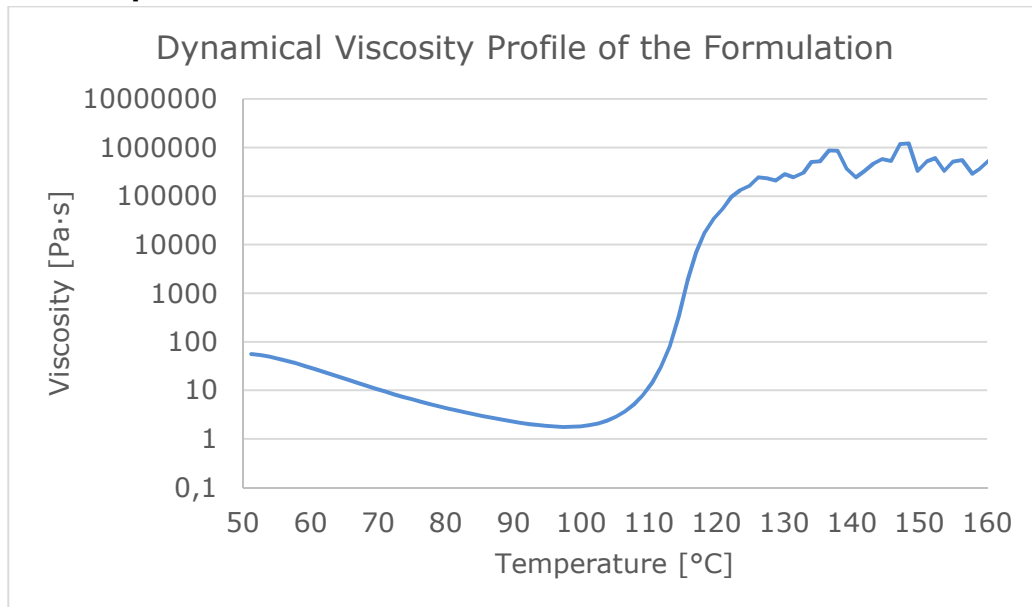
Initial Mix Viscosity	at 25°C [Pas]	26400
	at 50°C [Pas]	56
	at 65°C [Pas]	15
	at 75°C [Pas]	5,5
Gel Time (Rheometer)	at 120°C [sec]	444
	at 130°C [sec]	252
	at 150°C [sec]	108
Cure Time with HPDSC	at 150°C and 7 Bar [sec]	510
Prepreg Shelf Life	at 23 °C	2 weeks

Cured Matrix Properties

Cured Matrix Properties (cured at 80 °C 30 minutes → 100 °C 30 minutes → 140 °C 60 minutes)		
Glass Transition Temp (Tg by DSC) [°C]	DSC Cure= Ramped from RT to 150°C (10C/min) @150 °C 5 min, Ramped 150 to 210°C (10C/min) DSC Tg measurement= Cool from 210°C to room temp	140
	Press Cure = Isothermal press @160 °C , mold@ RT Wait to mold reach 160 °C @160 °C 5 min DSC Tg measurement= Ramped from RT to 210°C (10C/min), Cool from 210°C to room temp (10C/min)	145
Tg DMA 1Hz, 3°C/min	Onset of E'	112,7
	Maximum of Tanδ	159

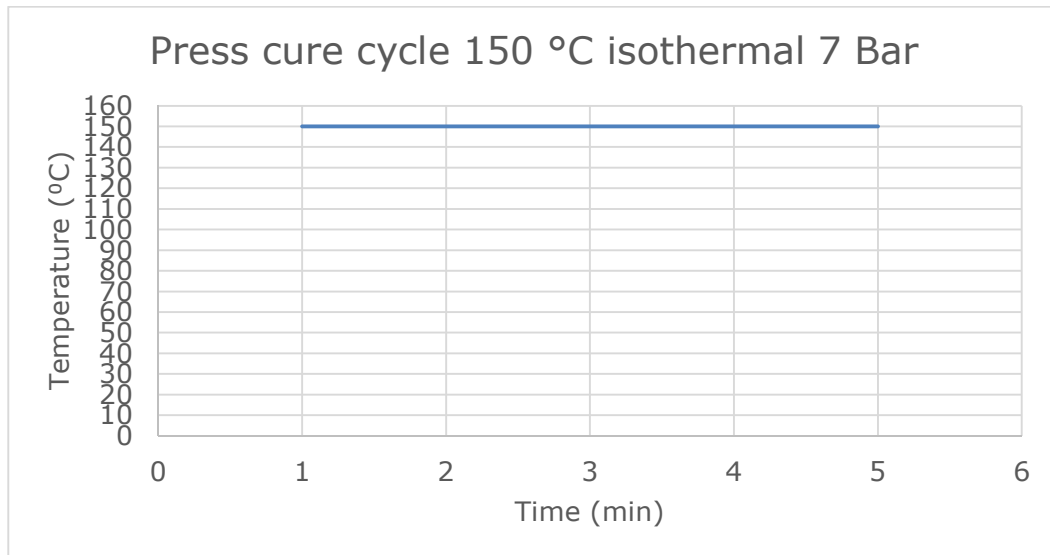
	Maximum of E''	136,60
Tensile Test (ASTM D3039)	Tensile Strength (MPa)	23
	Tensile Modulus (MPa)	3310
	Elongation at maximum (%)	0,70
Flexural Test (ASTM D790)	Flexural Strength (MPa)	68,3
	Flexural Modulus (MPa)	3630
	Elongation at maximum (%)	1,9

Resin Matrix Properties



Cure Profile

Compression Molding (Recommended)



Pressure: Minimum of 7 bar (7.2 kg/cm²) (*), **30 bar is recommended.**

Ramp Rate: Consolidated prepregs (preforms) can be loaded into a pre-heated tool (compression molding).

Recommended Cure Cycle: 5 minutes at 150 C +/-5C, 30 bar @ Press

Recommended Post-Cure Cycle: 6 hours at 150 C +/-5C @ Oven

Cool Down: Cured parts can be removed from tool without cooling (hot demolding).

(*) It may be necessary to adjust and optimize the pressure applied and the time when the pressure it is applied in order to achieve the best quality on the part

COMPRESSION MOULDING is the recommended process for the CM11 resin system

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