

TECHNICAL DATA SHEET

Resin System	CM12
Applications	Visual composites, Automotive
Key Features	Suitable for fast press molding Class A Surface quality Good hot de-molding performance Good chemical resistance Improved Metal Adhesion Properties Waterspot/whitespot resistant DICY free formulation
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)	195 - 500
%Resin Content (by weight)	37 - 48 ± 2
Tackiness Level	Low to MidTack
Tack Life	5 Days @ RT

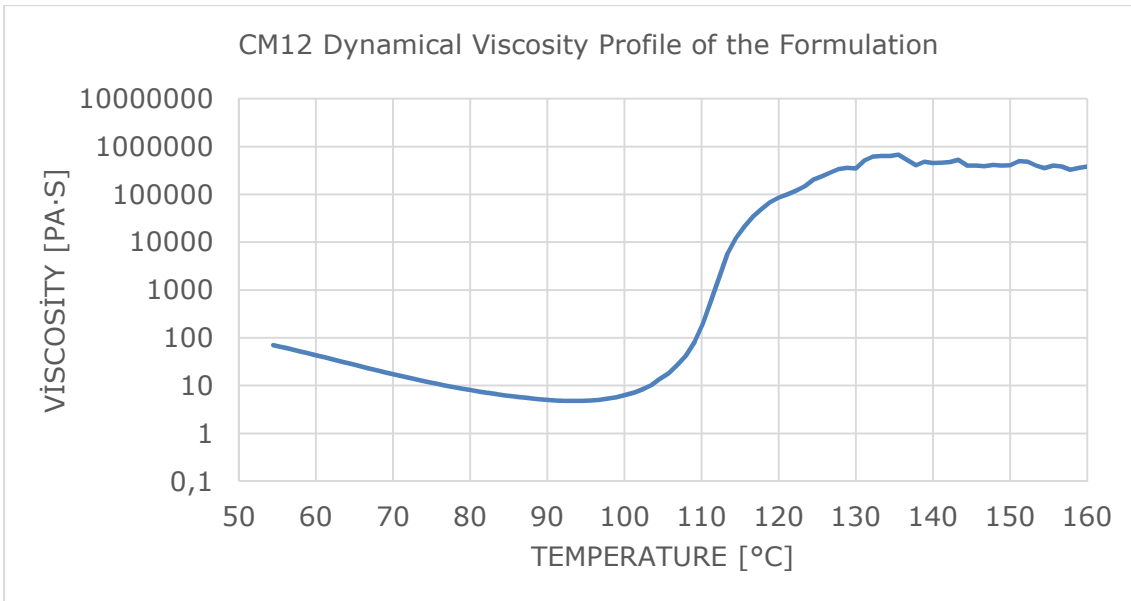
Initial Mix Viscosity	at 50°C [Pas]	83
	at 65°C [Pas]	21
	at 80°C [Pas]	7
Gel Time (Rheometer)	at 80°C [sec]	2252
	at 120°C [sec]	281
	at 150°C [sec]	143
Glass Transition Temp (Tg AND ΔH by DSC)	Ramped from 20 to 350°C (10C/min) Cooled to 20 °C (10C/min)	Tcure_start_end= 86,78-189,35°C ΔHnormalized=439J/g TgCooling=161 °C
	Ramped from 20 to 180°C (10C/min) Cooled to 20 °C (10C/min)	Tcure_start_end= 105-177°C ΔHnormalized=258J/g TgCooling=163 °C
Cure Time with HPDSC	at 150°C and 7 Bar [sec]	659
Prepreg Shelf Life	at 23 °C	2 weeks

Cured Matrix Properties

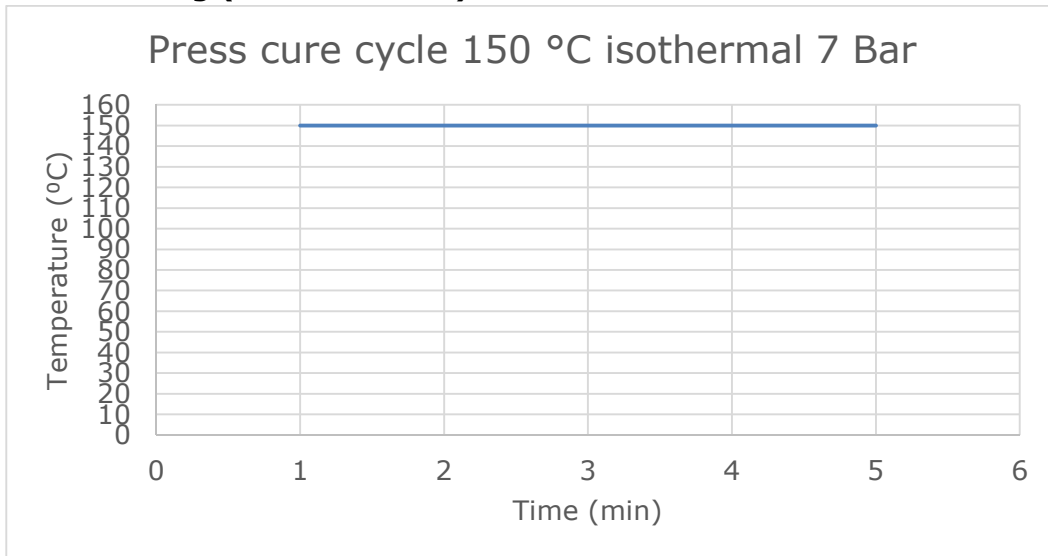
Cured Matrix Properties (cured at 80 °C 60 minutes → 140 °C 60 minutes)		
Tg DMA 1Hz, 2°C/min	Onset of E'	113
	Maximum of Tanδ	159
	Maximum of E''	135
Tensile Test (ASTM D3039)	Tensile Strength (MPa)	17
	Tensile Modulus (MPa)	3200
	Elongation at maximum (%)	0,5

Flexural Test (ASTM D790)	Flexural Strength (MPa)	42
	Flexural Modulus (MPa)	3560
	Elongation at maximum (%)	1,2
HDT (TMA)	Maximum Displacement (°C)	136

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 CM12 resin system

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