COMPOSITE TECHNOLOGIES
TECHNICAL DATA SHEET

OM12

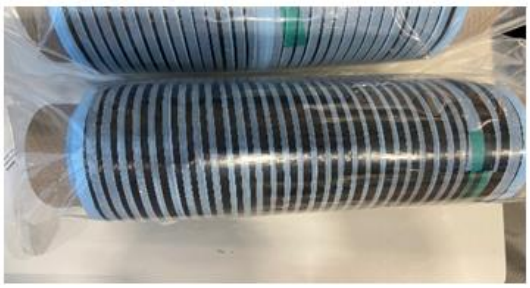
Opaque When Cured / Flexible Cure Cycle / Structural Applications / OOA Applications

Product

OM12 is a Vacuum Bag only Low Tg resin usually preferred in Marine industry to produce medium to large parts. It becomes white opaque when cured.

» Industrial composites
» Marine

Slit Tape Genaral Information

Resin System	AXOM12LT
Fiber Material	3K, 12K, 24K
Winding Type	Traverse 

Physical Features

Feature	Unit mm	Tolerance mm	Unit ınch	Tolerance inch
Slit Width	3,175	+/- 0,127mm	0,125	+/- 0,005”
Slit Width	6,35	+/- 0,127mm	0,25	+/- 0,005”
Slit Width	12,7	+/- 0,127mm	0,5	+/- 0,005”

Packaging

Liner Type	PE Film
Core diatemer	3 inches

Resin Matrix Properties

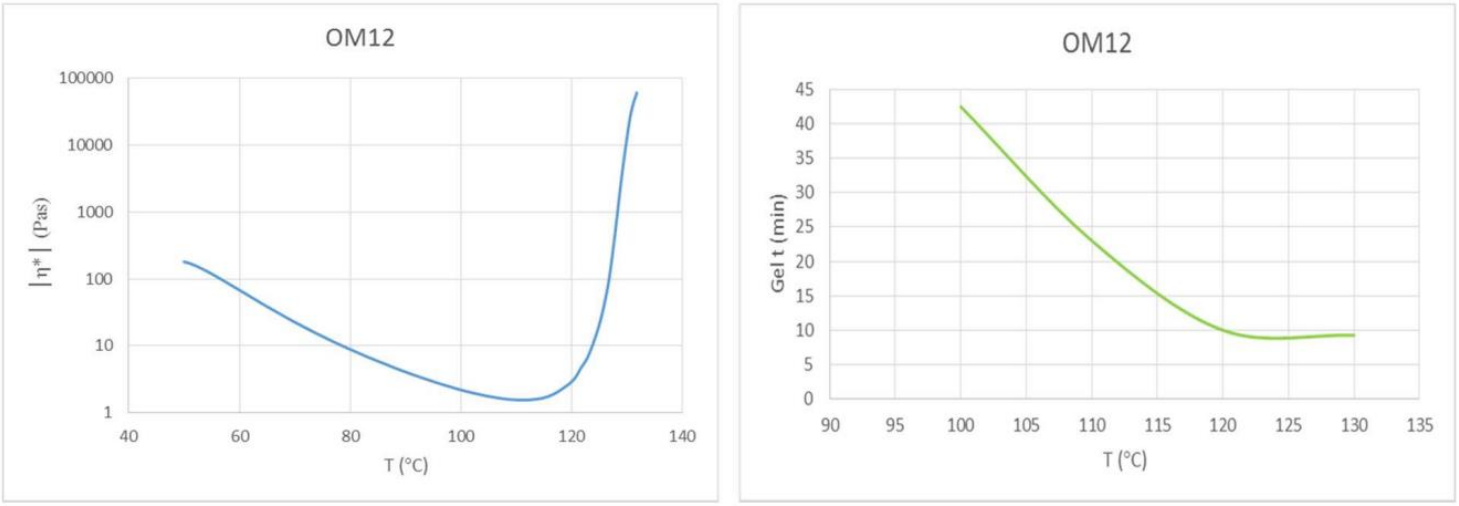


Figure 1 Dynamic viscosity and gel times of OM12

Resin Properties

Property	Test Method	Value
Cured Resin Color	N/A	Opaque White
Tg (DMA)	ASTM D6032	>110

Recommended Cure Cycles

Cure Temperature °C (°F)	Cure Method	Cure Duration (min)
80 (176)	Oven	12 hours
85 (185)	Oven	10 hours
90 (194)	Oven	6 hours
100 (212)	Oven	3 hours
120 (248)	Oven	1 hours

Our products are flexible by design:
Additional weights, roll sizes, and reinforcements are available.

Recommended Curing Conditions

Property	Oven/Vacuum Bag	
Typical Ramp Rate	1 – 2 °C/min	
Cure Temperature	80 °C	120 °C
Cure Dwell Time	12 hours	1 hour
Cure Pressure	-1 bar	
De-mold Temperature	< 60 °C	
Dry Tg (DMA)	< 100 °C	> 110 °C

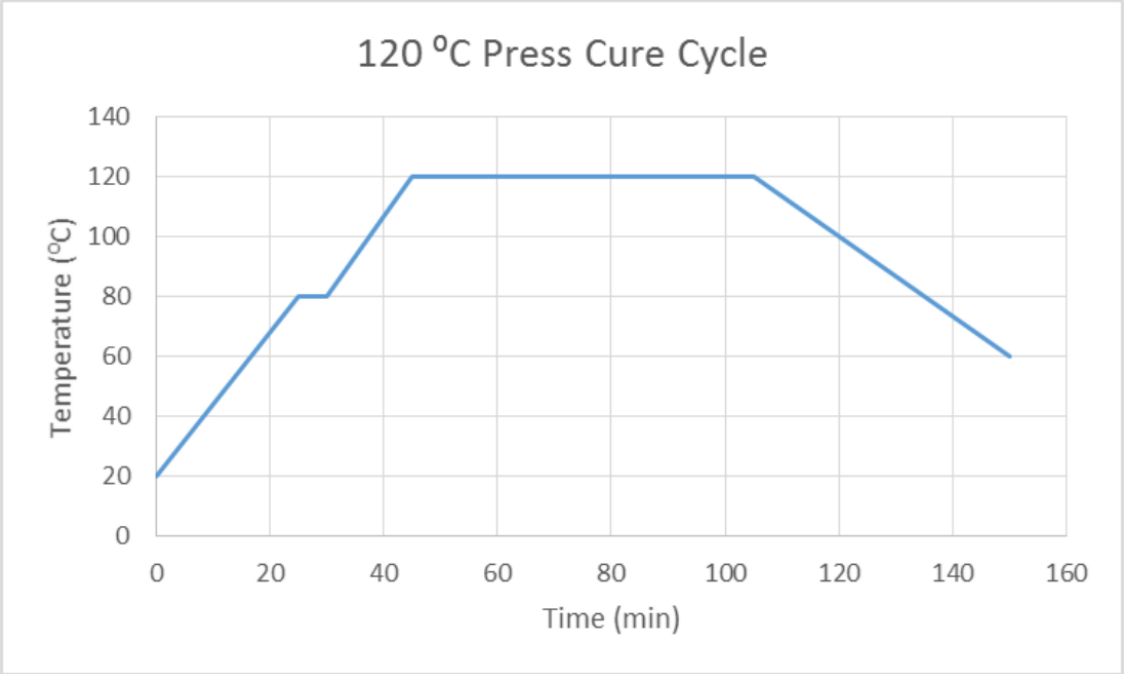
Vacuum Bagging and Oven Molding Recommended Curing Cycle

1) Apply minimum 25 Hg vacuum
2) 0.3 - 2°C per minute to the dwell temperature (85 °C)
3) Keep the laminate at 85 °C for 1 hour
4) Increase the temperature to 120 °C (final cure temperature)
5) Keep the laminate at the final cure temperature for 1 hour
6) Vacuum should be maintained as high as possible
7) Upon completion of cure, turn off heat and cool the part before de-molding

* De-bulking at each 900 gsm is strictly recommended. Cure time may be extended to 2 hours for thick and long parts.

Compression Molding - Recommended Curing Cycle at 120 ºC

1) Pre-heat the press to 80 °C
2) Place the laminate into press and hold the laminate at 80°C applying 1 - 5 bar for 5 minutes.
3) Increase the temperature of the laminate to 120 ºC while holding the pressure at 1 - 5 bars.
4) Hold the laminate at 130 ºC applying 5 - 10 bars for 60 minutes. If possible, cool to below 100°C before de-molding.



Physical and Mechanical Properties *(Examples only. For the wider prepreg range, please contact Kordsa)*

Property	Standard	Test Temp.	Property	210 GSM E-Glass Twill Fabric 68 TEX 42% Resin Content
Tensile	ASTM D3039	25 °C	0° Tensile Strength MPa	534
			0° Tensile Modulus GPa	23
			90° Tensile Strength MPa	396
			90° Tensile Modulus GPa	19
	ASTM D3410	25 °C	0° Compressive Strength MPa	282
			0° Compressive	23

Compression			Modulus GPa	
			90° Compressive Strength MPa	314
			90° Compressive Modulus GPa	20
Flexural	ASTM D790	25 °C	0° Flexural Strength MPa	491
			0° Flexural Modulus GPa	20
			90° Flexural Strength MPa	423
			90° Flexural Modulus GPa	15
V-notch Shear	ASTM D5379	25 °C	0° Shear Strength MPa	51
			0° Shear Modulus GPa	3
			90° Shear Strength MPa	60
			90° Shear Modulus GPa	3
Impact	ISO 179	25 °C	0° Impact Energy KJ/m^2	111
			90° Impact Energy KJ/m^2	110

Typical OM12LT Uni Directional Prepeg Mechanical Properties

Property	Standard	Test Temp.	Property	UD150 12K Carbon Fiber %35 Resin Content
Tensile	ASTM D3039	25 °C[1]	0° Tensile Strength MPa	2487
			0° Tensile Modulus GPa	137
			90° Tensile Strength MPa	45
			90° Tensile Modulus GPa	8
		- 53°C[1]	0° Tensile Strength MPa	2488
			0° Tensile Modulus GPa	134
		83 °C[2]	0° Tensile Strength MPa	1800
			0° Tensile Modulus GPa	119
			90° Tensile Strength MPa	14
			90° Tensile Modulus GPa	2
Compression	ASTM 6641	25 °C[1]	0° Compressive Strength MPa	1207
			0° Compressive Modulus GPa	118
			90° Compressive Strength MPa	171
			90° Compressive Modulus GPa	9
	ASTM 6641	83 °C[2]	0° Compressive Strength MPa	345
			0° Compressive Modulus GPa	95
	SACMA SRM 1, Tabbed	25 °C[1]	90° Compressive Strength MPa	185
		83 °C[2]	90° Compressive Strength MPa	43
	SACMA SRM 1, Un-tabbed	25 °C[1]	90° Compressive Strength MPa	7922
		83 °C[2]	90° Compressive Strength MPa	44
Shear, Interlaminar	ASTM D2344	25 °C[1]	0° Shear Strength MPa	85
		83 °C[2]	0° Shear Strength MPa	43

[1] Dry Conditioning Procedure: Dry at 160°F for 120-130 hrs
[2] Wet Conditioning Procedure: In distilled water at 70 °C for 14 days

Storage Requirements

Shelf life is from date of manufacturing according to storage temperature below. Working life is the cumulation of time outside of storage temperature.

Storage Condition	OM12
Shelf Life at -18ºC (0ºF)	12 months
Shelf Life at 4ºC (40ºF)	6 months
Working Life at 24ºC (75ºF)	14 days

Handling & Safety Instructions

» Store prepreg suspended horizontally to avoid flat spots and thinning under the weight of the roll.

» Allow product sufficient time (at least 24 hours) to reach ambient temperatures after removal from cold storage to prevent condensation on the adhesive surface.

» Use the appropriate safety equipment for this product.

» Refer to the OM12 Material Safety Data Sheet for specific safety instructions.

Technical Assistance

In a bind? Call us anytime. We provide fast and knowledgeable technical support:

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