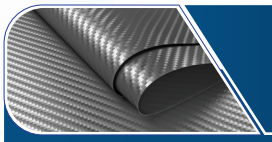


Phenolic - APR 201P

Technical Data Sheet

Azista has developed the **HOT-MELT PHENOLIC PREPREGS.** The APR 201P has been developed to meet global manufacturing requirements and enable void-free components in a healthy working environment. Azista's Phenolic Prepregs exhibits remarkable versatility and can be efficiently processed using various methods such as Autoclave, compression moulding.

Features:

- Solvent free, hot melt phenolic prepregs
- Good tack and drape characteristics
- Exceptional Flame Retardancy

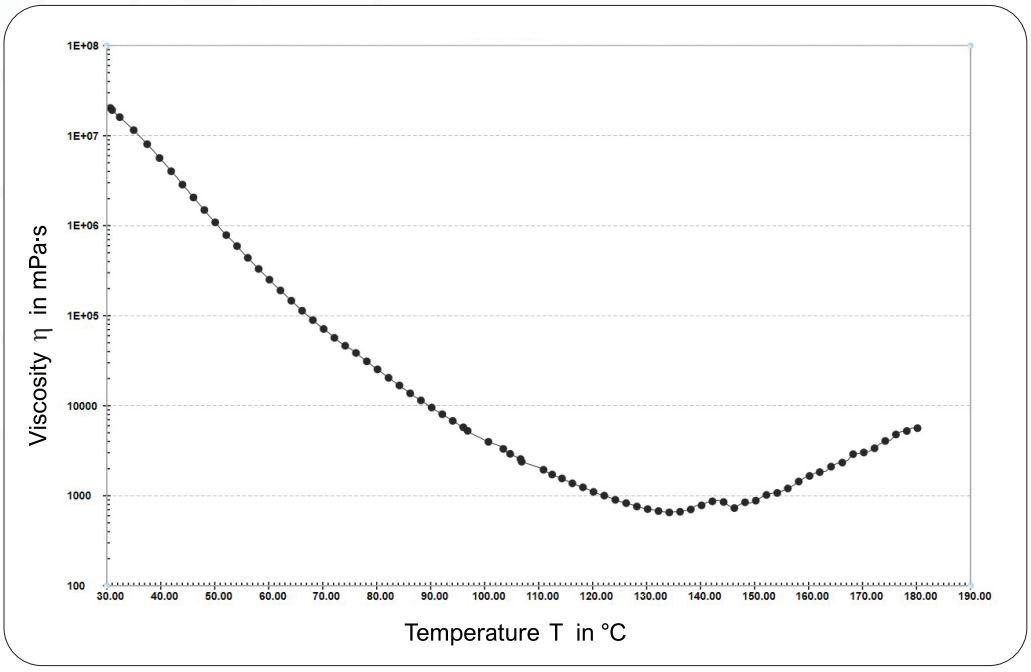
Applications:

- Aircraft interiors
- Railway interiors
- Structural components
- Thermal protection systems

Neat Resin Properties

Property	Azista hot-melt PF
Type	Resol
Appearance	Wine red high viscous liquid
Specific gravity	1.115 g/ml
Viscosity	2.03 x 10^7 cP at 30°C 71281 cP at 70°C
Volatile content, wt.% (160 °C, 20 min)	8
Solid content, wt.% (170 °C, 1 hr)	90
Cured neat resin density, g/cc	1.19
Char yield (1000 °C), wt. %	44
Glass Transition Temperature (°C), by DSC	170

Rheology Curve



Prepreg Properties - T-300, 3K 8H satin weave carbon BD fabric

Properties	Units	Values
Fibre areal weight	GSM	380 ± 10
Prepreg areal weight	GSM	635 ± 45
Cured ply thickness	mm	0.33
Resin content	%	40 ± 2
Fabric density	g/cc	1.76

Mechanical Properties

C-Phenolic laminate - T-300, 3K 8H satin weave carbon BD fabric (V_f 60%)

Properties	Units	Values	Test Method
Tensile strength	MPa	822	ASTM D3039
Tensile Modulus	GPa	61	ASTM D3039
Flexural strength	MPa	794	ASTM D790
Flexural Modulus	GPa	53	ASTM D790
ILSS	MPa	46	ASTM D2344

Prepreg Properties - 7781, 8H satin weave glass BD fabric

Properties	Units	Values
Fibre areal weight	GSM	300
Prepreg areal weight	GSM	465
Cured ply thickness	mm	0.25
Resin content	%	37 - 38
Fiber density	g/cc	2.54

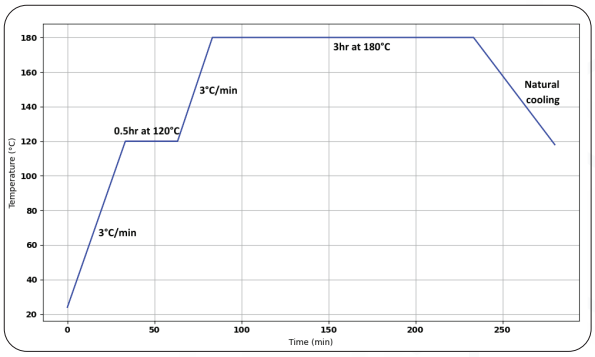
Mechanical Properties

G-Phenolic laminate - 7781, 8H satin weave glass BD fabric (V_f 54.5%)

Properties	Units	Values	Test Method
Tensile strength	MPa	369	ASTM D3039
Tensile Modulus	GPa	27	ASTM D3039
Flexural strength	MPa	474	ASTM D790
Flexural Modulus	GPa	22	ASTM D790
ILSS	MPa	44	ASTM D2344

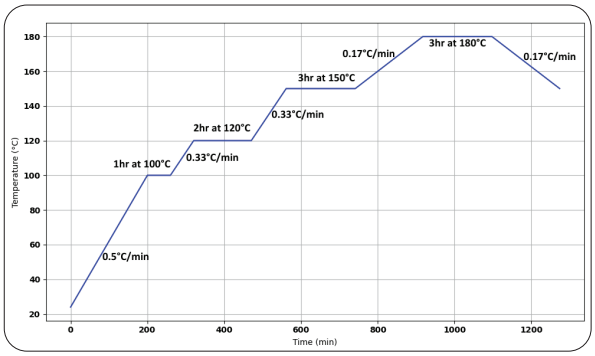
Cure Cycle (2 - 10 mm G-Phenolic laminate)

Temperature (°C)	Heating Rate (°C / min)	Dwell time (hr)
RT - 120	3	-
120	-	0.5
120 - 180	3	-
180	-	2 - 3
Cooling	Natural Cooling	-



Cure Cycle (15mm - 60mm G-Phenolic laminate)

Temperature (°C)	Heating Rate (°C / min)	Dwell time (hr)
RT - 100	0.5	-
100	-	1
100 - 120	0.33	-
120	-	2
120 - 150	0.33	-
150	-	3
150 - 180	0.17	-
180	-	3
180 - 150	0.17	-
Turn off the heater once the product temperature reaches 150°C. Depressurize the laminate once it reaches 50°C		



- Storage condition: Recommended to store at -18°C.
- Out life: up to 21 days at 22°C.
- Shelf life: 6 months at -18°C.

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