



Epoxy – AER 103T

Technical Data Sheet

AER 103T is a hot-melt towpreg developed by Azista and utilizes a toughened, controlled flow epoxy resin system with a curing temperature of 130°C (266°F). The towpregs have a long out life at room temperature and a shelf life of 12 months at -18°C (0°F), AER 103T offers simple and flexible processing with an excellent damage tolerance suitable for filament winding applications.

Features:

- » Solvent free, hot melt epoxy towpregs
- » Excellent mechanical properties
- » Moderate tack and drape characteristics
- » Long out life at room temperature

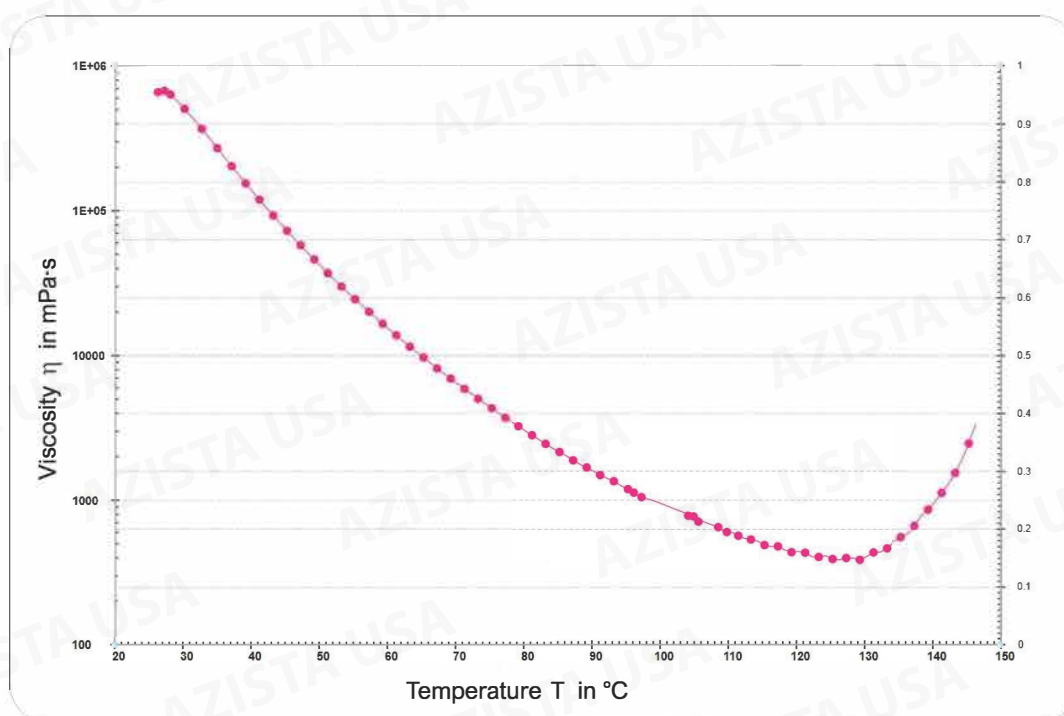
Applications:

- » Composite pressure vessels
- » Rocket motor casing

Neat Resin Properties

Property	Value	Test Method
Glass Transition Temperature (T _g , °C)	160	DSC (Tan-Delta)
Cured Resin Density (g/cc)	1.23	ASTM D792

Rheology Curve



Towpreg Properties – T700 – 12K

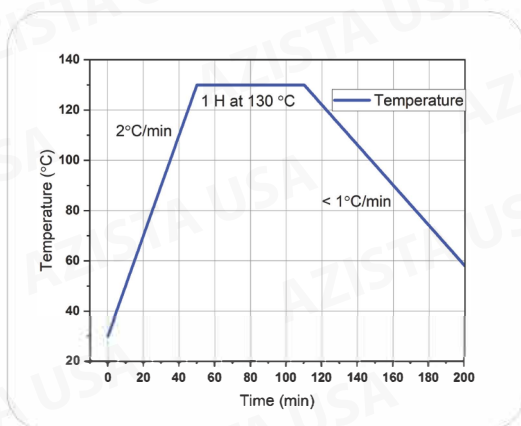
Properties	Units	Values
Fibre areal weight	g/m	0.8
Towpreg areal weight	g/m	1.15 ± 0.02
Resin Content	%	30 ± 2

Mechanical Properties – T700 – 12K

Properties	Units	Values	Test Method
Tensile strength	MPa	2170	ASTM D3039
Tensile Modulus	GPa	130	ASTM D3039
Flexural strength	MPa	1370	ASTM D790
ILSS	MPa	58	ASTM D2344
Compression Strength	MPa	1220	ASTM D3410

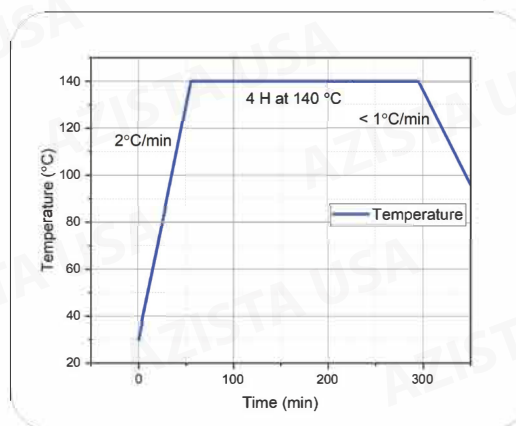
Cure Cycle

Temperature (°C)	Heating Rate (°C / min)	Dwell time (hr)
RT – 130	2	–
130	–	1
Cooling	< 1	–



Post-cure Cycle

Temperature (°C)	Heating Rate (°C / min)	Dwell time (hr)
RT – 140	2	–
140	–	4
Cooling	< 1	–



- » Storage condition: Recommended to store at -18°C.
- » Out life: up to 60 days at 22°C.
- » Shelf life: 12 months at -18°C.

