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Rynite® 815ER BK503

THERMOPLASTIC POLYESTER RESIN

Rynite® 815ER BK503 is a 15% Glass Reinforced, Toughened, Polyethylene Terephthalate Developed for Encapsulation Applications

Product information

Resin Identification	PET-IGF15	ISO 1043
Part Marking Code	>PET-IGF15<	ISO 11469

Rheological properties

Melt volume-flow rate	22	cm^3/10min	ISO 1133
Temperature	280	°C	
Load	5	kg	
Melt mass-flow rate	26	g/10min	ISO 1133
Melt mass-flow rate, Temperature	280	°C	
Melt mass-flow rate, Load	5	kg	
Moulding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.0	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	4300	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	82	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	5	%	ISO 527-1/-2
Flexural modulus	3700	MPa	ISO 178
Flexural strength	140	MPa	ISO 178
Charpy notched impact strength, 23°C	11	kJ/m^2	ISO 179/1eA
Izod notched impact strength, 23°C	11	kJ/m^2	ISO 180/1A
Poisson's ratio	0.36		

Thermal properties

Melting temperature, 10°C/min	250	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	190	°C	ISO 75-1/-2
RTI, electrical, 0.75mm	140	°C	UL 746B
RTI, electrical, 1.5mm	140	°C	UL 746B
RTI, electrical, 3.0mm	140	°C	UL 746B
RTI, impact, 0.75mm	120	°C	UL 746B
RTI, impact, 1.5mm	120	°C	UL 746B
RTI, impact, 3.0mm	120	°C	UL 746B
RTI, strength, 0.75mm	140	°C	UL 746B
RTI, strength, 1.5mm	140	°C	UL 746B
RTI, strength, 3.0mm	140	°C	UL 746B

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Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
UL recognition	yes		UL 94
Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.81	mm	IEC 60695-11-10
UL recognition	yes		UL 94
Glow Wire Ignition Temperature, 3.0mm	775	°C	IEC 60695-2-13
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	mm/min	ISO 3795 (FMVSS 302)

Physical/Other properties

Density	1390	kg/m³	ISO 1183
Density of melt	1170	kg/m³	

Injection

Drying Recommended	yes	
Drying Temperature	120	°C
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.02[1]	%
Melt Temperature Optimum	285	°C
Min. melt temperature	270	°C
Max. melt temperature	290	°C
Screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	95	°C
Min. mould temperature	75	°C
Max. mould temperature	95	°C
Hold pressure range	≥80	MPa
Hold pressure time	4	s/mm
Back pressure	As low as possible	MPa
Ejection temperature	170	°C

[1]: At levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Heat stabilised or stable to heat

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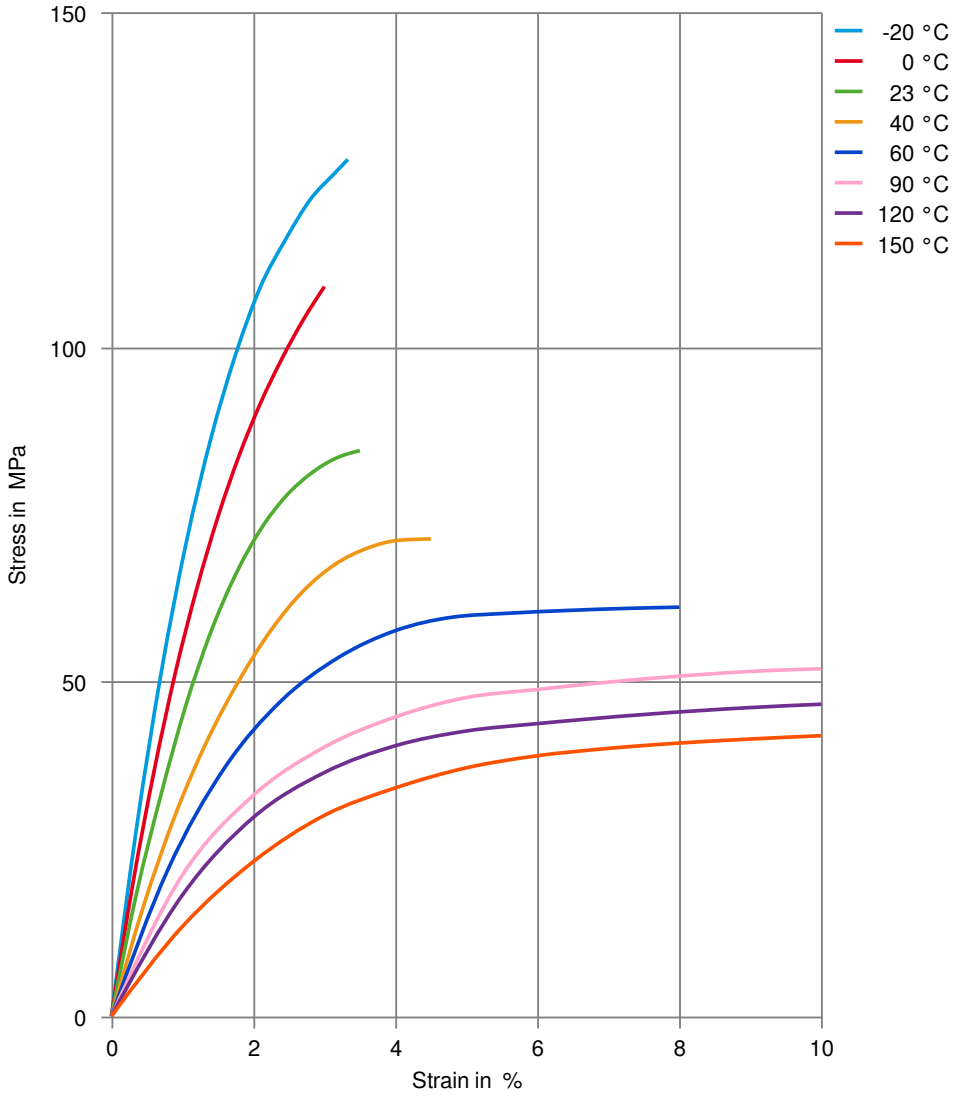
Stress-strain
(measured on Rynite® 815ER NC010)



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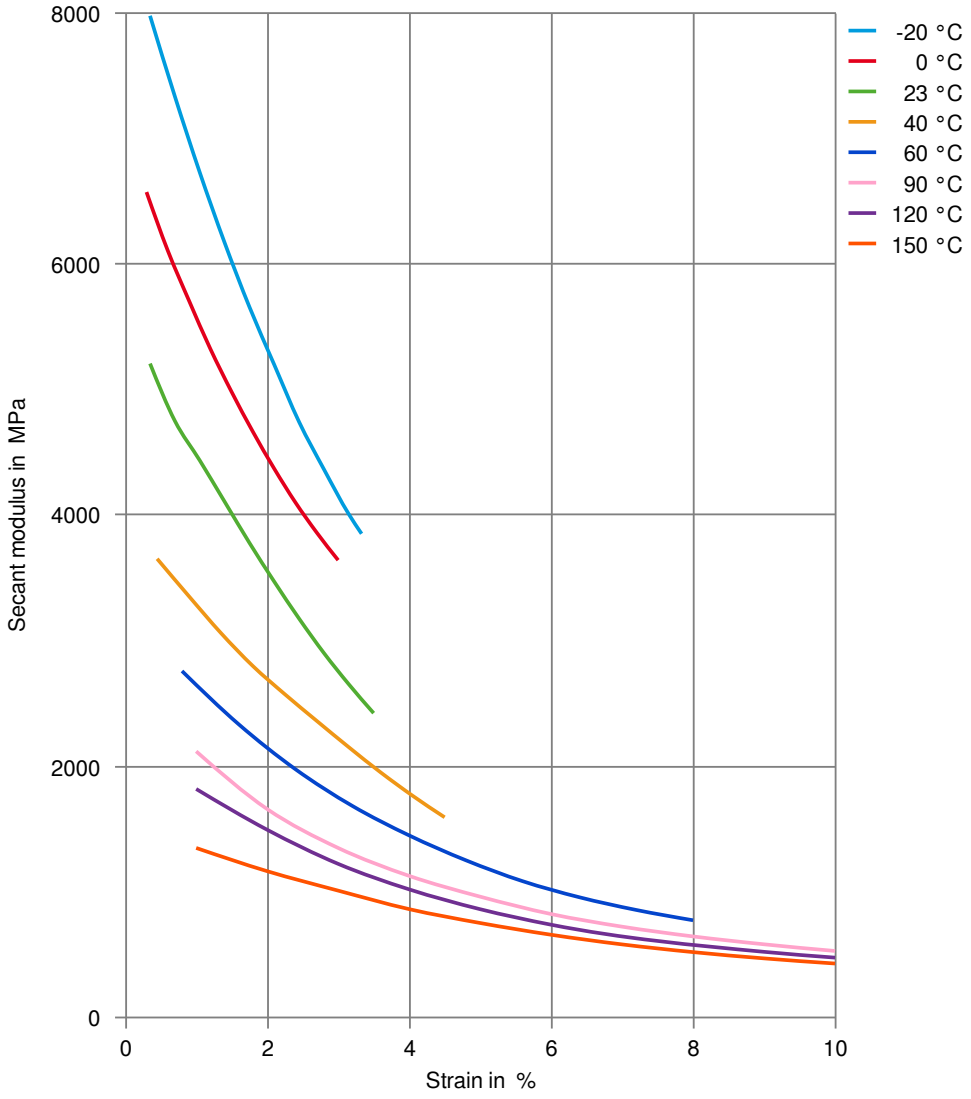
THERMOPLASTIC POLYESTER RESIN

Secant modulus-strain
(measured on Rynite® 815ER NC010)



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