

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
Melt mass-flow rate	26 g/10min	ISO 1133
Temperature	280 °C	
Load	5 kg	
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
Stress at break, 5mm/min	82 MPa	ISO 527-1/-2
Strain at break, 5mm/min	5 %	ISO 527-1/-2
Flexural Modulus	3700 MPa	ISO 178
Flexural Strength	135 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
Temp. of deflection under load, 1.8 MPa	210 °C	ISO 75-1/-2
RTI, electrical, 0.75mm	140 °C	UL 746B
RTI, electrical, 1.5mm	140 °C	UL 746B
RTI, electrical, 3mm	140 °C	UL 746B
RTI, impact, 0.75mm	120 °C	UL 746B
RTI, impact, 1.5mm	120 °C	UL 746B
RTI, impact, 3mm	120 °C	UL 746B
RTI, strength, 0.75mm	140 °C	UL 746B
RTI, strength, 1.5mm	140 °C	UL 746B
RTI, strength, 3mm	140 °C	UL 746B



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Flammability

Burning Behav. at 1.5mm nom. thickn.	HB class	UL 94
Thickness tested	1.5 mm	UL 94
UL recognition	yes	UL 94
Burning Behav. at thickness h	HB class	UL 94
Thickness tested	0.81 mm	UL 94
UL recognition	yes	UL 94
Glow Wire Ignition Temperature, 3mm	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)

Other properties

Density	1390 kg/m ³	ISO 1183
Density of melt	1170 kg/m ³	Internal

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	Internal
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	
Ejection temperature	170 °C	Internal

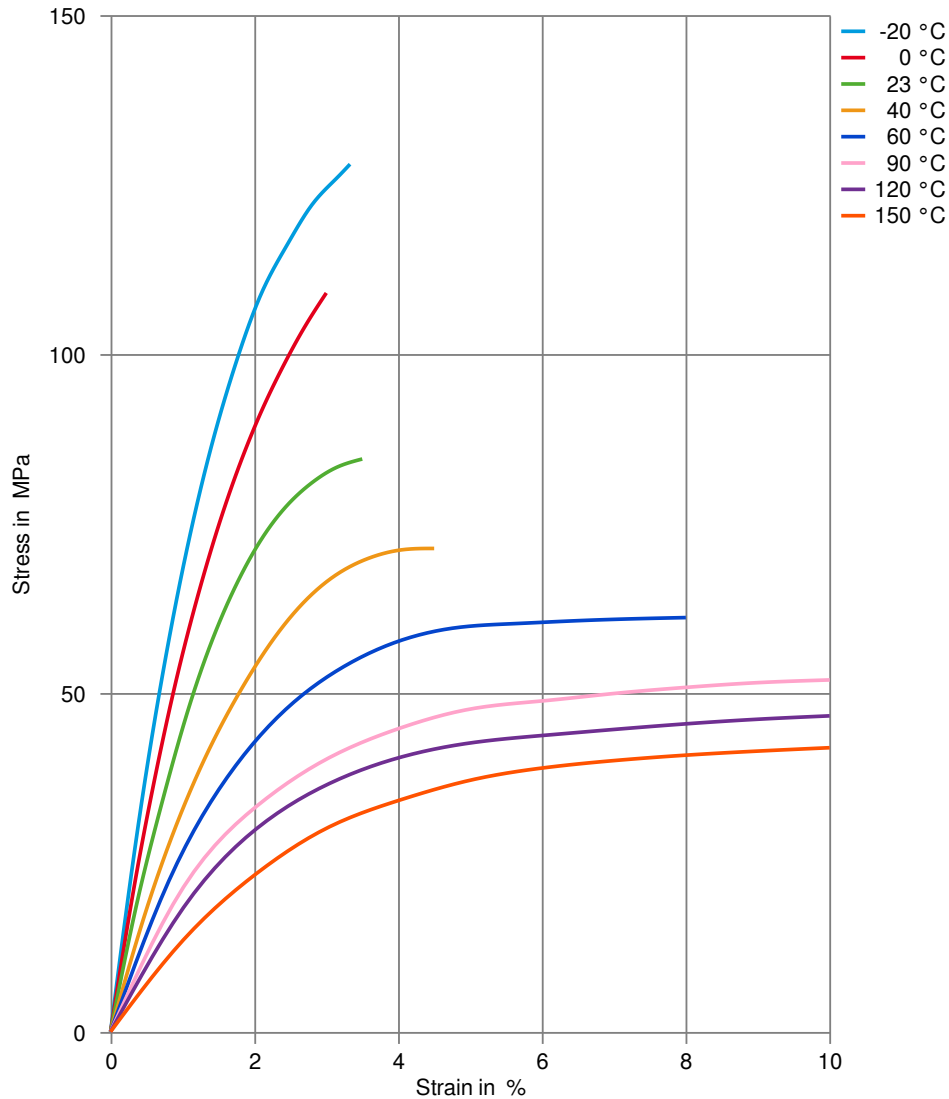
[1]: At levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.



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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)

