



# Rynite® 408 BK515

## THERMOPLASTIC POLYESTER RESIN

Rynite® 408 BK515 is a 30% Glass Reinforced, Toughened, Polyethylene Terephthalate

### Product information

Resin Identification	PET-IGF30	ISO 1043
Part Marking Code	>PET-IGF30<	ISO 11469

### Rheological properties

Moulding shrinkage, parallel	0.2 <sup>[DS]</sup> %	ISO 294-4, 2577
Moulding shrinkage, normal	0.8 <sup>[DS]</sup> %	ISO 294-4, 2577

[DS]: Derived from similar grade

### Typical mechanical properties

Tensile Modulus	9300 MPa	ISO 527-1/-2
Stress at break	127 MPa	ISO 527-1/-2
Strain at break	2.9 %	ISO 527-1/-2
Flexural Modulus	7960 MPa	ISO 178
Charpy impact strength, 23°C	64 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	86 <sup>[DS]</sup> kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	13 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	12 <sup>[DS]</sup> kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C	13 kJ/m <sup>2</sup>	ISO 180/1A
Poisson's ratio	0.34 -	

[DS]: Derived from similar grade

### Thermal properties

Melting temperature, 10°C/min	250 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	218 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	237 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	15 <sup>[DS]</sup> E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	85 <sup>[DS]</sup> E-6/K	ISO 11359-1/-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	140 °C	UL 746B
RTI, impact, 1.5mm	140 °C	UL 746B
RTI, impact, 3mm	140 °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	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	0.75 mm	IEC 60695-11-10
UL recognition	yes -	UL 94
FMVSS Class	B -	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80 mm/min	ISO 3795 (FMVSS 302)

### Electrical properties

Relative permittivity, 1MHz	3.3 <sup>[DS]</sup> -	IEC 62631-2-1
Dissipation factor, 1MHz	150 <sup>[DS]</sup> E-4	IEC 62631-2-1
Volume resistivity	>1E13 <sup>[DS]</sup> Ohm.m	IEC 62631-3-1
Surface resistivity	1E14 <sup>[DS]</sup> Ohm	IEC 62631-3-2
Electric strength	33 kV/mm	IEC 60243-1
Electric Strength, Short Time, 1mm	31 kV/mm	IEC 60243-1
Electric Strength, Short Time, 2mm	22 kV/mm	IEC 60243-1

[DS]: Derived from similar grade

### Other properties

Density	1490 kg/m <sup>3</sup>	ISO 1183
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### Injection

Drying Recommended	yes
Drying Temperature	120 °C
Drying Time, Dehumidified Dryer	4 - 6 h
Processing Moisture Content	≤0.02 <sup>[1]</sup> %
Melt Temperature Optimum	285 °C
Min. melt temperature	270 °C
Max. melt temperature	290 °C
Max. 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

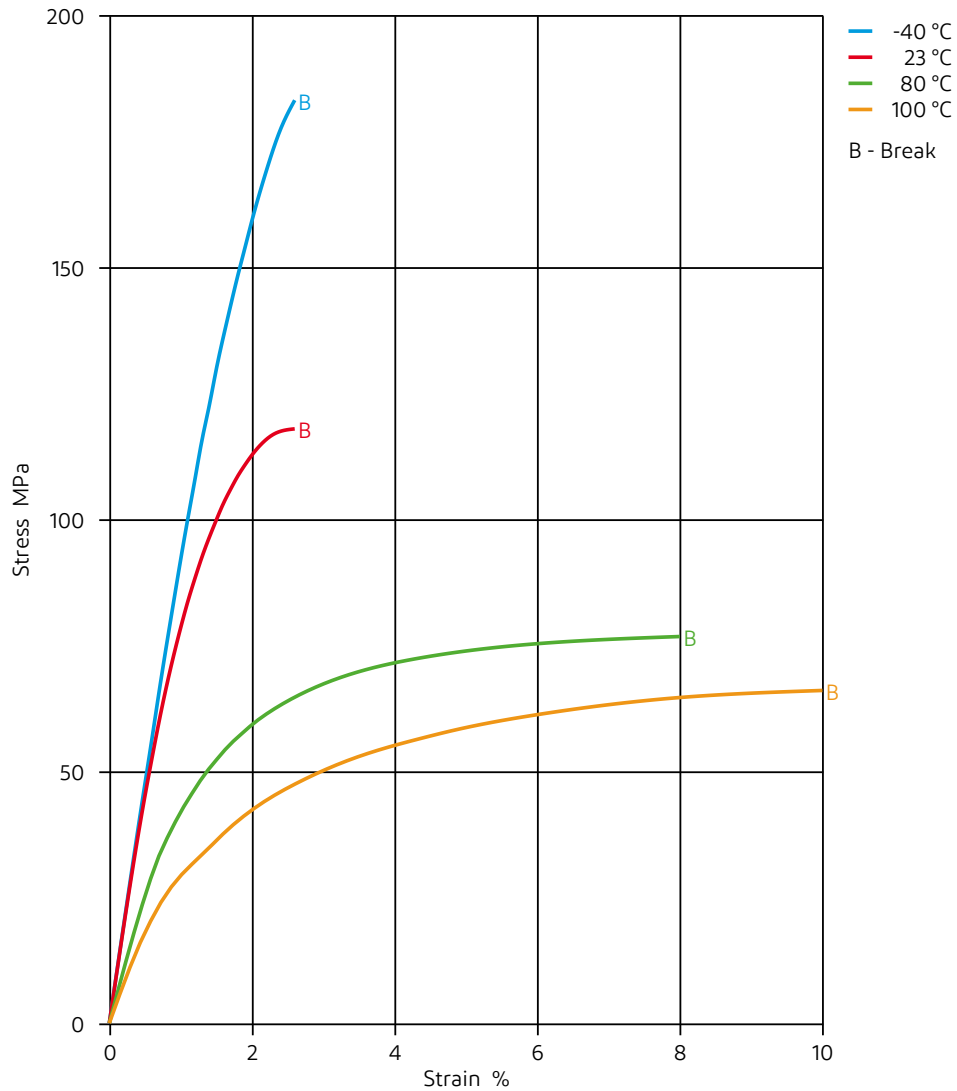
[1]: At levels above 0.02%, strength and toughness will decrease, even though parts may not exhibit surface defects.



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## Stress-strain

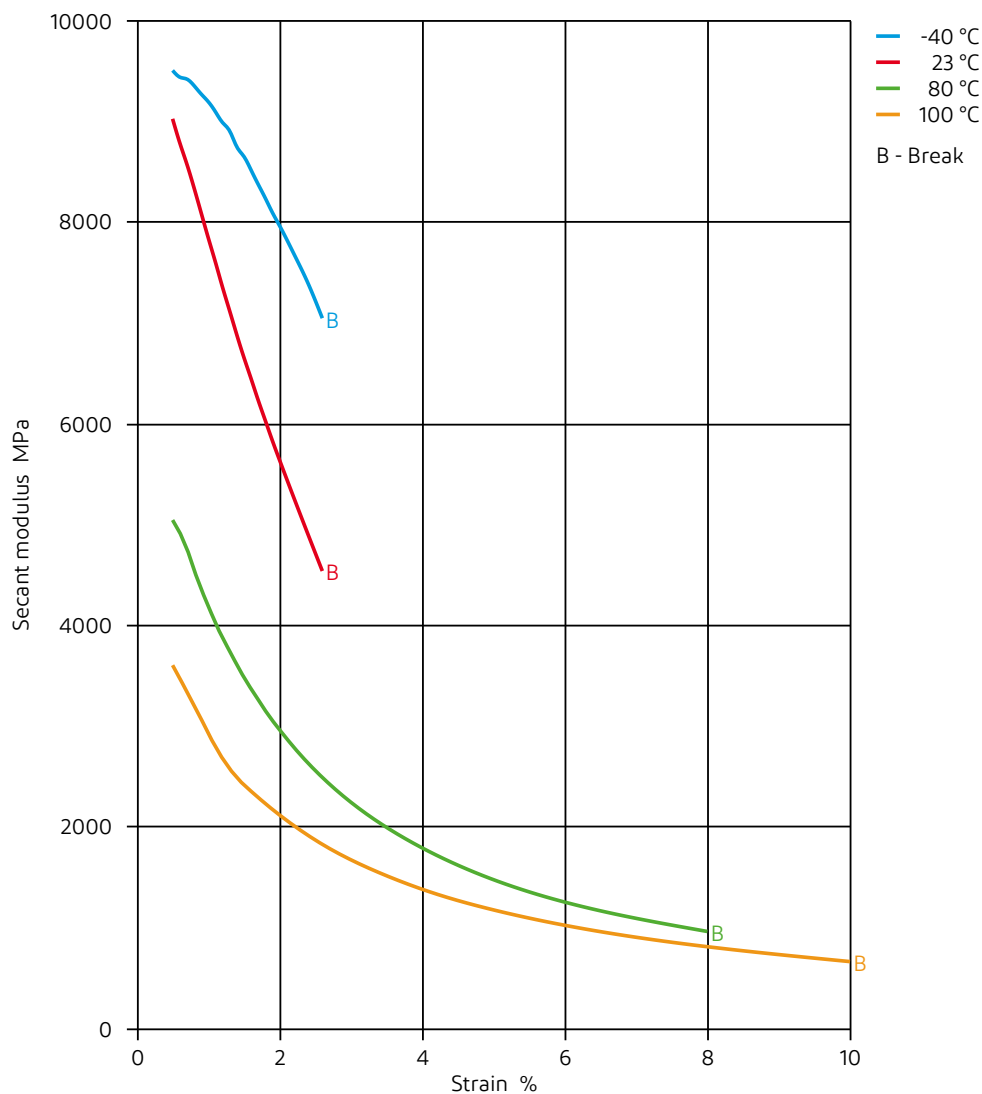




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## Secant modulus-strain



Revised: 2021-03-26

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