

# Crastin® SK643FR BK851

## THERMOPLASTIC POLYESTER RESIN

Crastin® SK643FR BK851 is a 20% Glass Reinforced, Flame Retardant, Polybutylene Terephthalate

### Product information

Resin Identification	PBT- GF20FR(17)	ISO 1043
Part Marking Code	>PBT-GF20FR(17)<	ISO 11469

### Rheological properties

Melt volume-flow rate	4 cm <sup>3</sup> /10min	ISO 1133
Temperature	250 °C	
Load	2.16 kg	
Viscosity number	100 cm <sup>3</sup> /g	ISO 307, 1157, 1628
Moulding shrinkage, parallel	0.5 %	ISO 294-4, 2577
Moulding shrinkage, normal	1.2 %	ISO 294-4, 2577
Moulding shrinkage, parallel, annealed	0.6 %	ISO 294-4
Moulding shrinkage, normal, annealed	1.45 %	ISO 294-4

### Typical mechanical properties

Tensile Modulus	8300 MPa	ISO 527-1/-2
Stress at break, 5mm/min	110 MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.8 %	ISO 527-1/-2
Flexural Strength	165 MPa	ISO 178
Charpy impact strength, 23°C	50 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	7.6 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.34	

### Thermal properties

Melting temperature, 10°C/min	225 °C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	55 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	200 °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, electrical, 6mm	140 °C	UL 746B
RTI, impact, 0.75mm	130 °C	UL 746B
RTI, impact, 1.5mm	130 °C	UL 746B
RTI, impact, 3mm	130 °C	UL 746B
RTI, impact, 6mm	130 °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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RTI, strength, 6mm 140 °C UL 746B

### Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	UL 94
Thickness tested	1.5 mm	UL 94
UL recognition	yes	UL 94
Burning Behav. at thickness h	V-0 class	UL 94
Thickness tested	0.75 mm	UL 94
UL recognition	yes	UL 94
Oxygen index	32 %	ISO 4589-1/-2
FMVSS Class	DNI	ISO 3795 (FMVSS 302)

### Electrical properties

Comparative tracking index 225 IEC 60112

### Other properties

Humidity absorption, 2mm	0.13 %	Sim. to ISO 62
Water absorption, 2mm	0.32 %	Sim. to ISO 62
Density	1630 kg/m <sup>3</sup>	ISO 1183

### Injection

Drying Recommended	yes	
Drying Temperature	120 °C	
Drying Time, Dehumidified Dryer	2 - 4 h	
Processing Moisture Content	≤0.04 %	
Melt Temperature Optimum	250 °C	Internal
Min. melt temperature	240 °C	
Max. melt temperature	260 °C	
Mold Temperature Optimum	80 °C	
Min. mould temperature	30 °C	
Max. mould temperature	130 °C	
Hold pressure range	≥60 MPa	
Hold pressure time	3 s/mm	
Back pressure	As low as possible	
Ejection temperature	170 °C	Internal

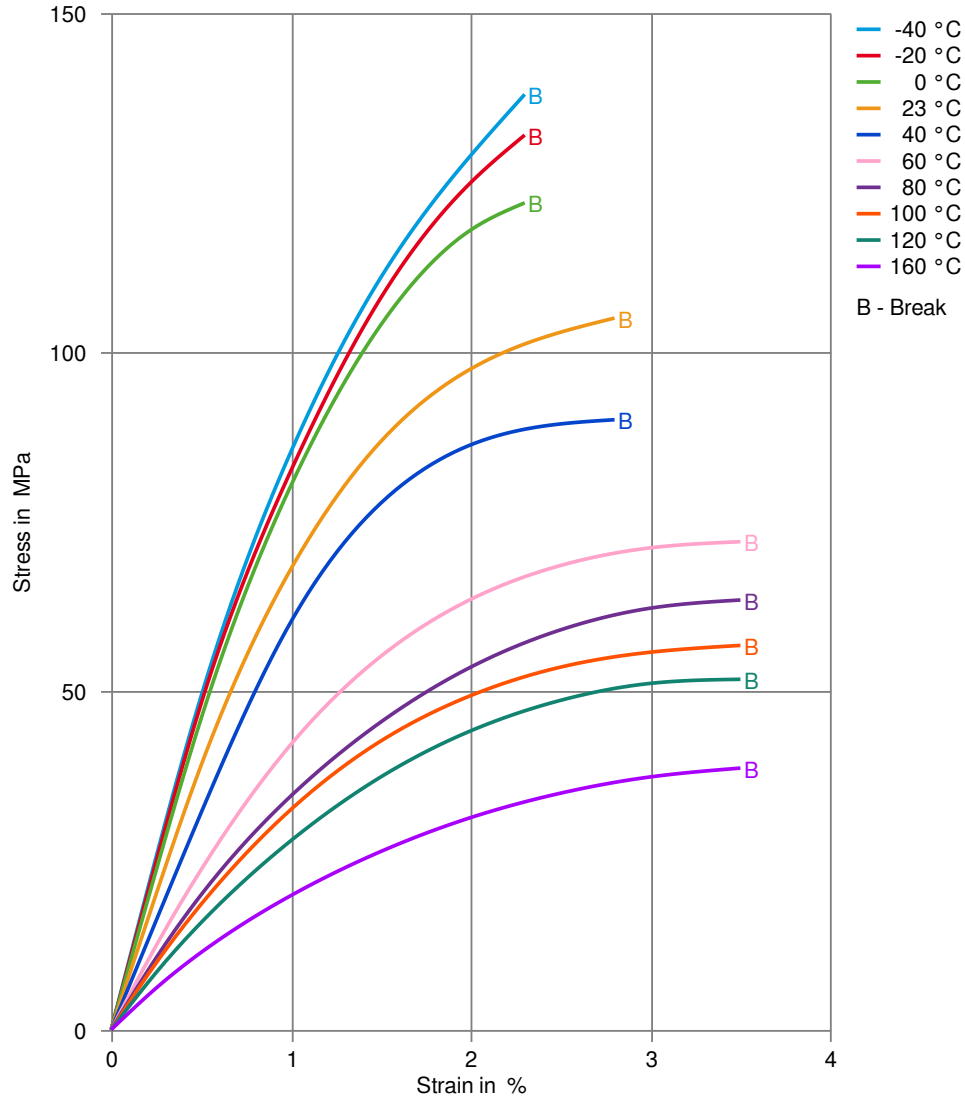
### Characteristics

Additives Flame retardant

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THERMOPLASTIC POLYESTER RESIN

Stress-strain  
(measured on Crastin® SK643FR NC010)



# Crastin® SK643FR BK851

THERMOPLASTIC POLYESTER RESIN

Secant modulus-strain  
(measured on Crastin® SK643FR NC010)

