

Crastin® FR685NH1 OR162 (PRELIMINARY)

THERMOPLASTIC POLYESTER RESIN

Crastin® FR685NH1 OR162 is a 30% Glass Reinforced, Flame Retardant, Non-Halogenated, Polybutylene Terephthalate

Product information

Resin Identification	PBT-	ISO 1043
	GF30FR(40)	
Part Marking Code	>PBT-GF30FR(40)<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.5 %	ISO 294-4, 2577
Moulding shrinkage, normal	1.3 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	11600 MPa	ISO 527-1/-2
Stress at break, 5mm/min	102 MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.1 %	ISO 527-1/-2
Flexural Modulus	11200 MPa	ISO 178
Flexural Strength	160 MPa	ISO 178
Charpy impact strength, 23°C	36 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	7 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	7 kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C	7 kJ/m ²	ISO 180/1A
Poisson's ratio	0.33	

Thermal properties

Melting temperature, 10°C/min	223 °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	205 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	222 °C	ISO 75-1/-2

Flammability

Burning Behav. at thickness h	V-0 class	UL 94
Thickness tested	0.4 mm	UL 94
UL recognition	yes	UL 94
Glow Wire Flammability Index, 0.4mm	960 °C	IEC 60695-2-12
Glow Wire Flammability Index, 0.75mm	960 °C	IEC 60695-2-12
Glow Wire Flammability Index, 1.5mm	960 °C	IEC 60695-2-12
Glow Wire Flammability Index, 3mm	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	750 °C	IEC 60695-2-13
Glow Wire Ignition Temperature, 0.4mm	750 °C	IEC 60695-2-12
Glow Wire Ignition Temperature, 1.5mm	750 °C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3mm	825 °C	IEC 60695-2-13
FMVSS Class	SE	ISO 3795 (FMVSS 302)

[1]: <https://iq.ul.com/ul/cert.aspx?ULID=104497409>



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Electrical properties

Comparative tracking index	600	IEC 60112
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Other properties

Humidity absorption, 2mm	0.1 ^[DS] %	Sim. to ISO 62
Water absorption, 2mm	0.25 ^[DS] %	Sim. to ISO 62
Density	1570 kg/m ³	ISO 1183
[DS]: Derived from similar grade		

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, Non-halogenated/Red phosphorous free flame retardant
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