

Crastin® FR684NH1 OR162

THERMOPLASTIC POLYESTER RESIN

Crastin® FR684NH1 is a 25% Glass Reinforced, Flame Retardant, Non-Halogenated, Polybutylene Terephthalate

Product information Resin Identification	PBT-	ISO 1043
Part Marking Code	GF25FR(40) >PBT-GF25FR(40)<	ISO 11469
Rheological properties Moulding shrinkage, parallel Moulding shrinkage, normal	0.5 % 1.2 %	ISO 294-4, 2577 ISO 294-4, 2577
Typical mechanical properties Tensile modulus Tensile stress at break, 5mm/min Tensile strain at break, 5mm/min Charpy impact strength, 23°C Charpy impact strength, -30°C Charpy notched impact strength, -30°C Charpy notched impact strength, -30°C Poisson's ratio	9500 MPa 96 MPa 2.5 % 42 kJ/r 46 kJ/r 7.4 kJ/r 7.1 kJ/r 0.34	a ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 179/1eU m ² ISO 179/1eU ISO 179/1eA
Thermal properties Melting temperature, 10°C/min Glass transition temperature, 10°C/min Temperature of deflection under load, 1.8 MPa Coeff. of linear therm. expansion, parallel, -40-23°C CLTE, Parallel, 23-55°C(73-130°F) Coeff. of linear therm. expansion, parallel, 55-160°C Coeff. of linear therm. expansion, normal, -40-23°C Coefficient of linear thermal expansion (CLTE), Normal, 23-55°C (73-130°F) Coefficient of linear thermal expansion (CLTE), normal, 55-160°C [DS]: Derived from similar grade	223 °C 60 °C 205 ^[DS] °C 23 ^[DS] E-6, 29 ^[DS] E-6, 20 ^[DS] E-6, 122 ^[DS] E-6, 122 ^[DS] E-6,	/K ASTM E 831 /K ISO 11359-1/-2 /K ISO 11359-1/-2 /K ASTM E 831
Flammability Burning Behav. at thickness h Thickness tested UL recognition Oxygen index [DS]: Derived from similar grade	V-0 clas 0.4 mm yes 40 ^[DS] %	

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Electrical properties

Volume resistivity	>1E13 ^[DS] Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 ^[DS] Ohm	IEC 62631-3-2
Electric strength	41 kV/mm	IEC 60243-1
Comparative tracking index	600	IEC 60112
[DS]: Derived from similar grade		

Physical/Other properties

Humidity absorption, 2mm	0.1 ^[DS] %	Sim. to ISO 62
Water absorption, 2mm	0.25 ^[DS] %	Sim. to ISO 62
Density	1520 ^[DS] 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	≤0.02	%
Melt Temperature Optimum	250	°C
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	MPa
	possible	
Fiection temperature	170	°C

Ejection temperature

Characteristics

Additives

Flame retardant, Non-halogenated/Red phosphorous free flame retardant

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