

FRIANYL® B3 GF30 V2

FRIANYL®

Designed for Electrical applications requiring self-extinguishing properties combined with low warpage, flowability and excellent surface quality.

Product information

Resin Identification	PA6-GF30FR(30)	ISO 1043
Part Marking Code	>PA6-GF30FR(30)<	ISO 11469
Continuous Service Temperature	110 °C	IEC 60216-1

Rheological properties

Moulding shrinkage range, parallel	0.4 - 0.8 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.6 - 1 %	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	7900/-	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	83/-	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5/-	%	ISO 527-1/-2
Charpy impact strength, 23°C	29/-	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	3.5/-	kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	3.5/-	kJ/m ²	ISO 180/1A
Poisson's ratio	0.34/- ^[C]		

[C]: Calculated

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	225/*	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	185/*	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	215/*	°C	ISO 75-1/-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-2/*	class	IEC 60695-11-10
Burning Behav. at thickness h	V-2/*	class	IEC 60695-11-10
Thickness tested	0.75/*	mm	IEC 60695-11-10
UL recognition	yes/*		UL 94
Glow Wire Flammability Index, 1.0mm	960/-	°C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0mm	960/-	°C	IEC 60695-2-12
FMVSS Class	SE		ISO 3795 (FMVSS 302)
Hot Wire Ignition, 0.75mm	PLC 4/*	s	UL 746A
Hot Wire Ignition, 1.5mm	PLC 3/*	s	UL 746A
Hot Wire Ignition, 3mm	PLC 0/*	s	UL 746A

Electrical properties

	dry/cond.		
Arc Resistance Performance Level Category	PLC 5/*	class	UL 746B
High Amperage Arc Ignition Category, 1.5 mm	PLC 0/*	class	UL 746A

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Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.8 / *	%	Sim. to ISO 62
Water absorption, 2mm	6 / *	%	Sim. to ISO 62
Density	1430 / -	kg/m ³	ISO 1183

Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.1 %
Melt Temperature Optimum	245 °C
Min. melt temperature	235 °C
Max. melt temperature	260 °C
Screw tangential speed	≤0.2 m/s
Mold Temperature Optimum	80 °C
Min. mould temperature	60 °C
Max. mould temperature	90 °C

Characteristics

Processing	Injection Moulding
Delivery form	Granules
Additives	Flame retardant, Non-halogenated/Red phosphorous free flame retardant
Special characteristics	Flame retardant, Heat stabilised or stable to heat, High Flow, Low Warpage