

FRIANYL® B3 GF30 V0 NC 1102/T

FRIANYL®

Designed for Electrical applications requiring self-extinguishing properties combined with good mechanical performances, this grade meets the most stringent safety requirements for insulating materials.

Product information

Resin Identification	PA6-GF30FR(40)	ISO 1043
Part Marking Code	>PA6-GF30FR(40)<	ISO 11469
Continuous Service Temperature	120 °C	IEC 60216-1

Rheological properties

Moulding shrinkage range, parallel	0.2 - 0.5 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.5 - 0.8 %	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	10300/-	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	140/-	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3/-	%	ISO 527-1/-2
Charpy impact strength, 23°C	62.8/-	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	11.5/-	kJ/m ²	ISO 179/1eA
Ball indentation hardness, H 961/30	210/-	MPa	ISO 2039-1
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	210/*	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	220/*	°C	ISO 75-1/-2
RTI, electrical, 0.75mm	120	°C	UL 746B
RTI, electrical, 3.0mm	120	°C	UL 746B
RTI, impact, 0.75mm	100	°C	UL 746B
RTI, impact, 3.0mm	100	°C	UL 746B
RTI, strength, 0.75mm	125	°C	UL 746B
RTI, strength, 3.0mm	125	°C	UL 746B

Flammability

	dry/cond.		
Burning Behav. at thickness h	V-0/*	class	IEC 60695-11-10
Thickness tested	0.8/*	mm	IEC 60695-11-10
UL recognition	yes/*		UL 94
Glow Wire Flammability Index, 0.75mm	960/-	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	960/-	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	775/-	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	800/-	°C	IEC 60695-2-13
FMVSS Class	SE		ISO 3795 (FMVSS 302)
Railway classification	R22/R23		EN 45545-2
Railway classification rating	HL3/HL3		EN 45545-2

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Electrical properties

	dry/cond.	
Volume resistivity	8E12/-	Ohm.m IEC 62631-3-1
Surface resistivity	*/5.98E13Ohm	IEC 62631-3-2

Physical/Other properties

	dry/cond.	
Humidity absorption, 2mm	1.4/*	% Sim. to ISO 62
Water absorption, 2mm	5.1/*	% Sim. to ISO 62
Density	1400/-	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	250 °C
Min. melt temperature	240 °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
Ejection temperature	175 °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

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
VW Group	VW 50134	*Best Fitting Grade To PA6-7-A, Not Officially Approved