

# FRIANYL® B3 GF30 V0XI NC 1101/B

## FRIANYL®

Designed for Electrical applications requiring self-extinguishing properties combined with excellent ignition resistance, this grade meets the most stringent safety requirements for insulating materials.

### Product information

Resin Identification	PA6-GF30FR(17 )	ISO 1043
Part Marking Code	>PA6-GF30FR(17)<	ISO 11469
Continuous Service Temperature	115 °C	IEC 60216-1

### Rheological properties

	dry/cond.		
Melt volume-flow rate	35/*	cm <sup>3</sup> /10min	ISO 1133
Temperature	270/*	°C	
Load	5/*	kg	
Moulding shrinkage, parallel	0.2/-	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.5/-	%	ISO 294-4, 2577

### Typical mechanical properties

	dry/cond.		
Tensile modulus	11500/-	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	160/-	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2/-	%	ISO 527-1/-2
Flexural modulus	8100/-	MPa	ISO 178
Flexural strength	190/-	MPa	ISO 178
Charpy impact strength, 23°C	65/-	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	10.5/-	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C	10/-	kJ/m <sup>2</sup>	ISO 180/1A
Izod impact strength, 23°C	60/-	kJ/m <sup>2</sup>	ISO 180/1U
Poisson's ratio	0.33/- <sup>[C]</sup>		

[C]: Calculated

### Thermal properties

	dry/cond.		
Temperature of deflection under load, 1.8 MPa	195/*	°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-0/*	class	IEC 60695-11-10
Burning Behav. at thickness h	V-0/*	class	IEC 60695-11-10
Thickness tested	0.75/*	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	825/-	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	875/-	°C	IEC 60695-2-13
FMVSS Class	SE		ISO 3795 (FMVSS 302)

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### Electrical properties

	dry/cond.		
Electric strength	21 / -	kV/mm	IEC 60243-1
Comparative tracking index	425 / -		IEC 60112

### Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.3 / *	%	Sim. to ISO 62
Water absorption, 2mm	4.5 / *	%	Sim. to ISO 62
Density	1580 / -	kg/m <sup>3</sup>	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

### Characteristics

Processing	Injection Moulding
Additives	Flame retardant
Special characteristics	Flame retardant, Heat stabilised or stable to heat