Celanese
The chemistry inside innovation™

FRIANYL® B3 GF30 V0XI BK 7021/A

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.		
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	11000 / -	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	160 / -	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	2.2 / -	%	ISO 527-1/-2
Flexural modulus	8000 / -	MPa	ISO 178
Flexural strength	190 / -	MPa	ISO 178
Charpy impact strength, 23°C	65 / -	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	10 / -	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	12 / -	kJ/m²	ISO 180/1A
Izod impact strength, 23°C	55 / -	kJ/m²	ISO 180/1U
Poisson's ratio	0.34 / -[C]		

[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)

Electrical properties

	dry/cond.		
Comparative tracking index	400 / -		IEC 60112

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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/m³	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