Celanese
The chemistry inside innovation™

FRIANYL® A3 GF20 V2XI NC 1101/E

FRIANYL®

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

Product information

Resin Identification	PA66-GF20 FR(16+72)	ISO 1043
Part Marking Code	>PA66-GF20 FR(16+72)<	ISO 11469
Continuous Service Temperature	120 °C	IEC 60216-1

Rheological properties

Moulding shrinkage range, parallel	0.3 - 0.6 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.5 - 0.8 %	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	6800 / -	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	2.5 / -	%	ISO 527-1/-2
Tensile stress at break, 5mm/min	115 / -	MPa	ISO 527-1/-2
Flexural modulus	6100 / -	MPa	ISO 178
Flexural strength	150 / -	MPa	ISO 178
Charpy impact strength, 23°C	40 / -	kJ/m²	ISO 179/1eU
Izod notched impact strength, 23°C	8 / -	kJ/m²	ISO 180/1A
Poisson's ratio	0.35 / -[C]		

[C]: Calculated

Thermal properties

	dry/cond.		
Temperature of deflection under load, 1.8 MPa	225 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	250 / *	°C	ISO 75-1/-2
Ball pressure test	175 / -	°C	IEC 60695-10-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-2 / *	class	IEC 60695-11-10
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	3.2 / *	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	900 / -	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	900 / -	°C	IEC 60695-2-13
FMVSS Class	SE		ISO 3795 (FMVSS 302)

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.1 / *	%	Sim. to ISO 62
Water absorption, 2mm	4 / *	%	Sim. to ISO 62
Density	1490 / -	kg/m³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	80	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	280	°C
Min. melt temperature	265	°C
Max. melt temperature	290	°C
Screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	80	°C
Min. mould temperature	70	°C
Max. mould temperature	90	°C
Ejection temperature	224	°C

Characteristics

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