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	248 °F	IEC 60216-1

Rheological properties

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

Typical mechanical properties

	dry/cond.		
Tensile modulus	986000 / -	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	2.5 / -	%	ISO 527-1/-2
Tensile stress at break, 5mm/min	16700 / -	psi	ISO 527-1/-2
Flexural modulus	885000 / -	psi	ISO 178
Flexural strength	21800 / -	psi	ISO 178
Charpy impact strength, 23°C	19 / -	ftlb/in²	ISO 179/1eU
Izod notched impact strength, 23°C	3.81 / -	ftlb/in²	ISO 180/1A

Thermal properties

	dry/cond.		
Temperature of deflection under load, 1.8 MPa	437 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	482 / *	°F	ISO 75-1/-2
Ball pressure test	347 / -	°F	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	0.1260 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94
Glow Wire Flammability Index, 0.75mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	1650 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	1650 / -	°F	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	0.0538 / -	lb/in³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	176	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	536	°F
Min. melt temperature	509	°F
Max. melt temperature	554	°F
Max. screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	158	°F
Max. mold temperature	194	°F
Ejection temperature	435	°F

Characteristics

Processing	Injection Molding
Additives	Flame retardant
Special characteristics	Flame retardant, Heat stabilized or stable to heat

Revised: 2025-02-14 Source: Celanese Materials Database

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