FRIANYL® XS3 E GF40 V0E OR2003 (PRELIMINARY)

FRIANYL®

Compound designed for safety parts with high mechanical requirements, typically used to replace metal due to the high stiffness and strength, stable after conditioning. Combines flame retardant properties with better creep behavior and dimensional stability vs. an equivalent PA66 grade, with lower warpage and good surface finish.

Product information

Resin Identification	(PA66+PA6I/6T)-GF40 FR(40)		ISO 1043
Part Marking Code	>(PA66+PA6I/6T)-GF40 FR(40)<		ISO 11469
Continuous Service Temperature	248	°F	IEC 60216-1

Rheological properties

Molding shrinkage range, parallel	0.1 - 0.4	%	ISO 294-4, 2577
Molding shrinkage range, normal	0.4 - 0.7	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	2.03E6 / 1.84E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	23200 / 18900	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.2 / 2.5	%	ISO 527-1/-2
Charpy impact strength, 23°C	30.9 / 28.5	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	26.2 / 23.8	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	4.52 / 4.76	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	4.28 / 4.14	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	500 / *	°F	ISO 11357-1/-3

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.0591 / *	in	IEC 60695-11-10
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.0315 / *	in	IEC 60695-11-10
FMVSS Class	SE		ISO 3795 (FMVSS 302)

Electrical properties

	dry/cond.		
Volume resistivity	>1E13 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / >1E15	Ohm	IEC 62631-3-2
Electric strength	1120 / -	kV/in	IEC 60243-1
Comparative tracking index	600 / -		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	0.8 / *	%	Sim. to ISO 62
Water absorption, 2mm	3.8 / *	%	Sim. to ISO 62
Density	0.0545 / -	lb/in³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	176	°F
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.1	%
Melt Temperature Optimum	554	°F
Min. melt temperature	518	°F
Max. screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	140	°F
Max. mold temperature	212	°F
Back pressure	as low as possible	psi

Characteristics

Processing	Injection Molding
Additives	Flame retardant
Special characteristics	Flame retardant, Heat stabilized or stable to heat, High Gloss, Low Warpage, Improved creep

Revised: 2026-08-10 Source: Celanese Materials Database

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.
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