CELANYL® XS3 GF50 BK 9005/V/FA

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Compound designed for parts with high mechanical requirements, typically used to replace metal due to the high stiffness and strength, stable after conditioning. It shows better creep behavior and dimensional stability vs. an equivalent PA66 grade, with lower warpage and excellent surface finish. Suitable for drinking water applications.

Product information

Resin Identification	(PA6I/6T+PA66)-GF50	ISO 1043
Part Marking Code	>(PA6I/6T+PA66)-GF50<	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 - 0.6 %	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	2.54E6 / 2.39E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	34800 / 30500	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.8 / 3	%	ISO 527-1/-2
Flexural modulus	2.32E6 / 2.03E6	psi	ISO 178
Flexural strength	55100 / 43500	psi	ISO 178
Charpy impact strength, 23 °C	47.6 / 45.2	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30 °C	45.2 / -	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23 °C	6.18 / 6.66	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30 °C	5.23 / -	ftlb/in²	ISO 179/1eA
Izod notched impact strength, 23 °C	6.18 / 7.14	ftlb/in²	ISO 180/1A

Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	500 / *	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	455 / *	°F	ISO 75-1/-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	0.0630 / *	in	IEC 60695-11-10
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.0157 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94

Electrical properties

	dry/cond.		
Relative permittivity, 2GHz	4.09 / -		IEC 61189-2-721
Dissipation factor, 2GHz	118 / -	E-4	IEC 61189-2-721
Volume resistivity	1E12 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric strength	813 / -	kV/in	IEC 60243-1
Comparative tracking index	600 / -		IEC 60112

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Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1 / *	%	Sim. to ISO 62
Water absorption, 2mm	3.5 / *	%	Sim. to ISO 62
Density	0.057 / -	lb/in³	ISO 1183

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. melt temperature	581	°F
Max. screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	140	°F
Max. mold temperature	212	°F

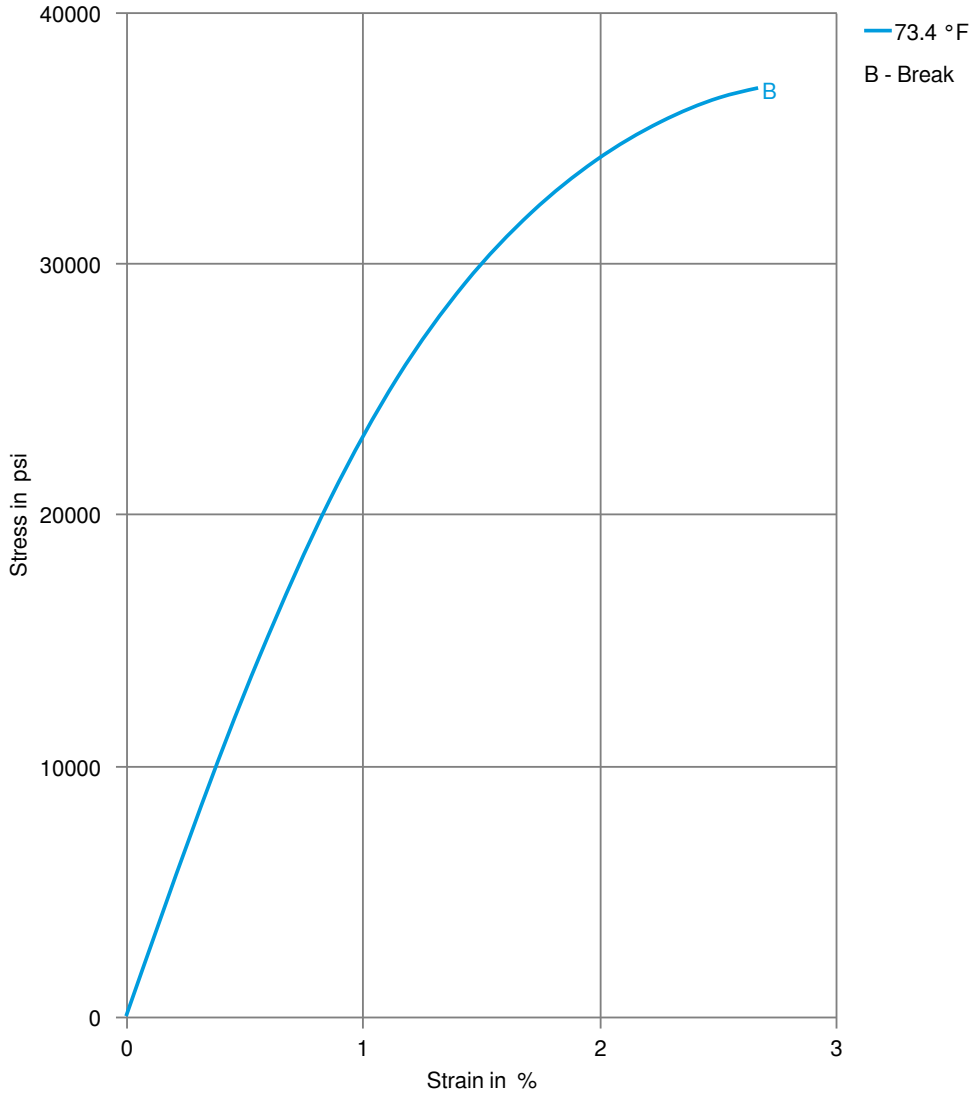
Characteristics

Processing	Injection Molding
Special characteristics	High Gloss, Low Warpage, Improved creep

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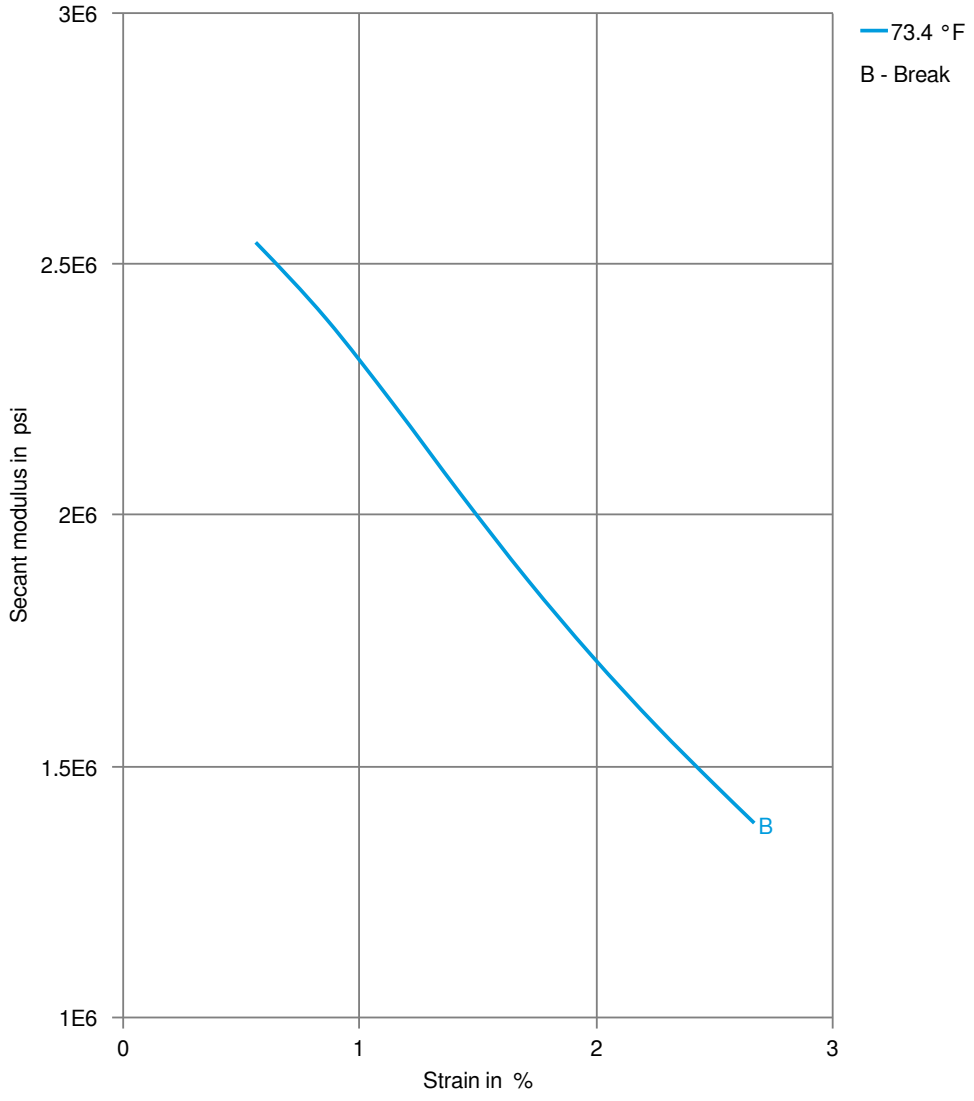
Stress-strain (dry)



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Secant modulus-strain (dry)



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