CELANYL® A3 D10 BK 9005/R

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General purpose grade, good flowability, improved flexibility.

Product information

Resin Identification	PA66-I		ISO 1043
Part Marking Code	>PA66-I<		ISO 11469
Continuous Service Temperature	239	°F	IEC 60216-1

Rheological properties

	dry/cond.		
Viscosity number	3880 / *	in³/lb	ISO 307, 1628
Molding shrinkage range, parallel	1.4 - 1.8	%	ISO 294-4, 2577
Molding shrinkage range, normal	1.4 - 1.8	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	392000 / 139000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	9400 / 5800	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	5 / 28	%	ISO 527-1/-2
Tensile strain at break, 50mm/min	25 / -	%	ISO 527-1/-2
Flexural modulus	348000 / 131000	psi	ISO 178
Flexural strength	14400 / 5800	psi	ISO 178
Charpy impact strength, 23°C	N / N	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30°C	>50 / -	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	3.81 / 7.14	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	1.43 / -	ftlb/in²	ISO 179/1eA
Poisson's ratio	0.444 / -		

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	500 / *	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	185 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	365 / *	°F	ISO 75-1/-2

Flammability

	dry/cond.		
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.0315 / *	in	IEC 60695-11-10
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	0.728	in/min	ISO 3795 (FMVSS 302)

Electrical properties

	dry/cond.		
Comparative tracking index	600 / -		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	2.1 / *	%	Sim. to ISO 62
Water absorption, 2mm	7.5 / *	%	Sim. to ISO 62
Density	0.0401 / -	lb/in³	ISO 1183

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Emissions

Odor test	2.5[1]	class	VDA 270

[1]: A3 : 2.5 / B3 : 2.0

Injection

Drying Recommended	yes	
Drying Temperature	176	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.15	%
Melt Temperature Optimum	554	°F
Min. melt temperature	536	°F
Max. melt temperature	572	°F
Max. screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	122	°F
Max. mold temperature	212	°F

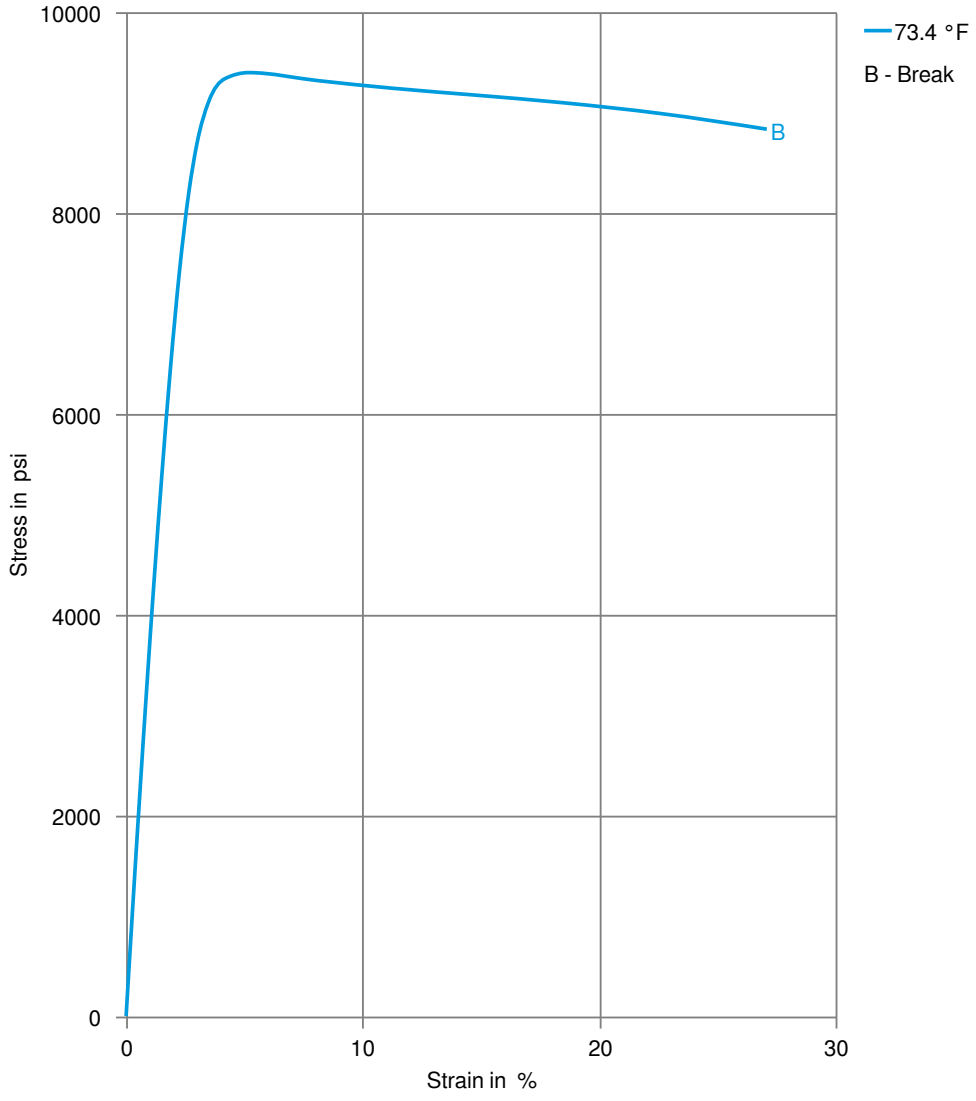
Characteristics

Processing	Injection Molding
Special characteristics	High impact or impact modified, Heat stabilized or stable to heat, High Flow

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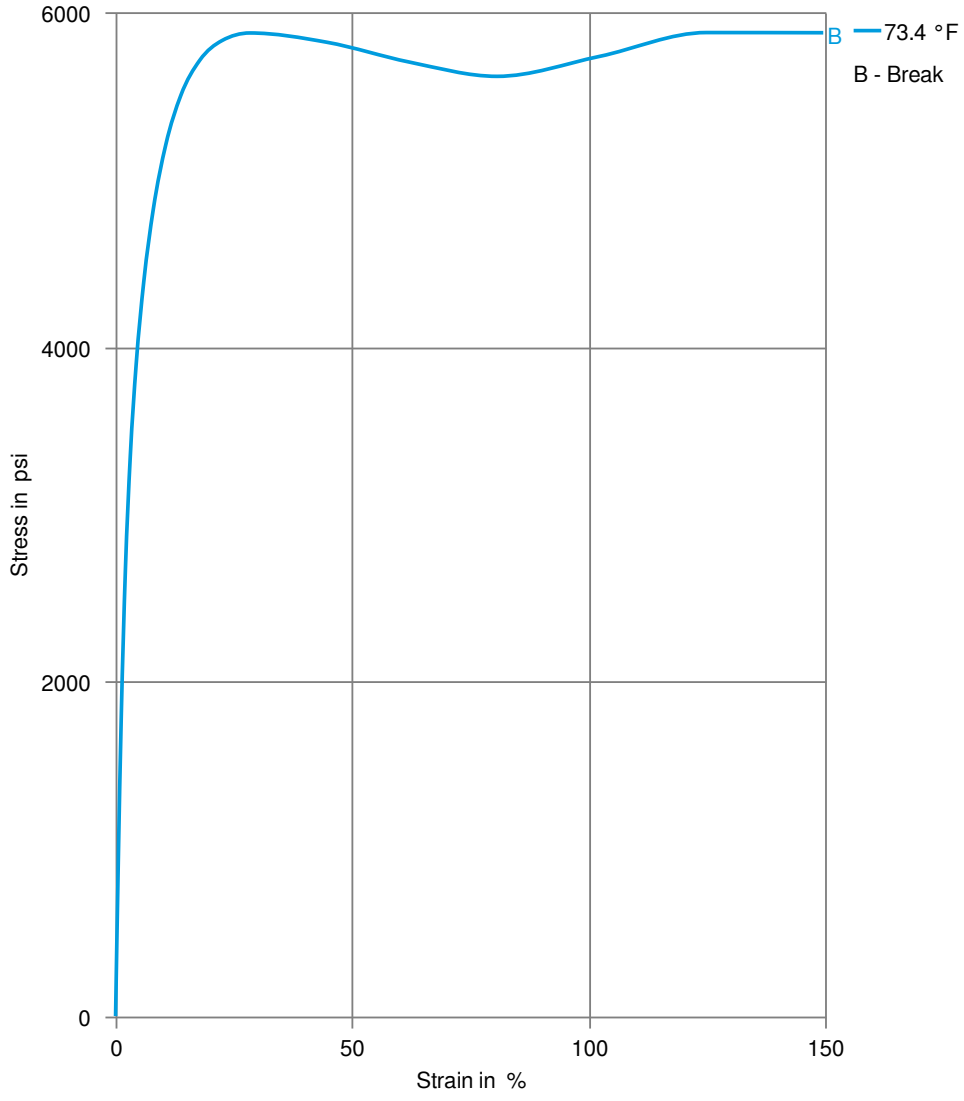
Stress-strain (dry)



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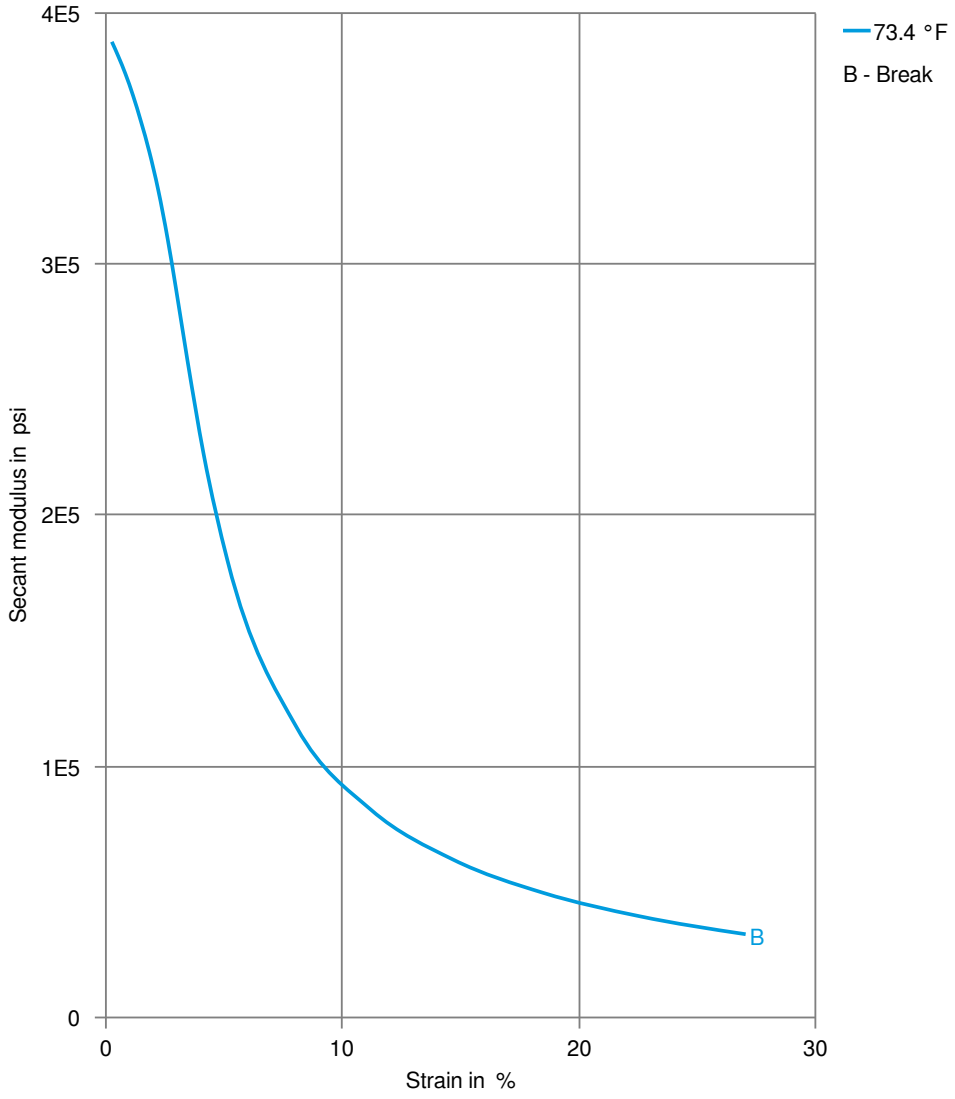
Stress-strain (cond.)



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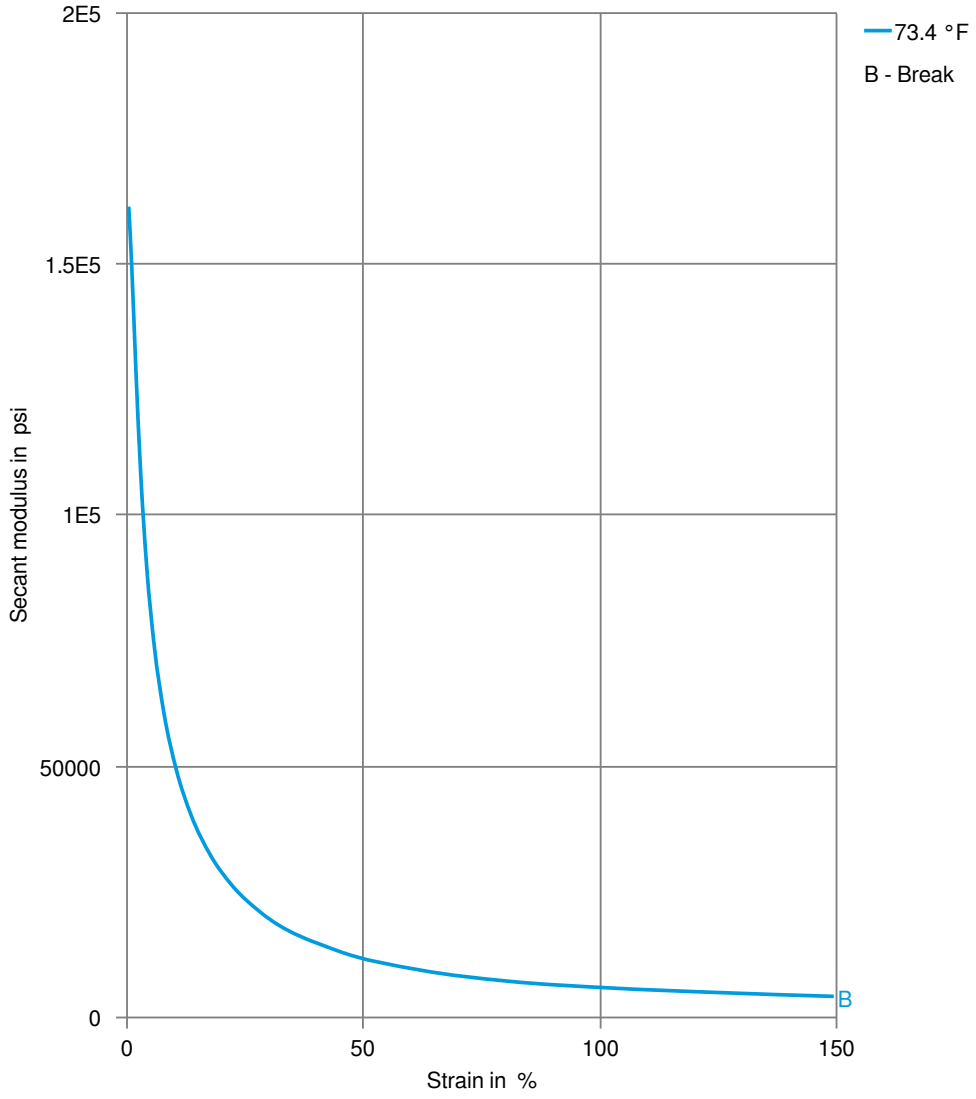
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



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