Zytel® 70K20HSL BK284

NYLON RESIN

Zytel® 70K20HSL BK284 is a 20% Kevlar® Fiber Reinforced, Heat Stabilized, Polyamide 66

Product information

Resin Identification	PA66-RF20		ISO 1043
Part Marking Code	>PA66-RF20<		ISO 11469
ISO designation	ISO 16396-PA66,AF20,M1CGHR,S14-050		

Rheological properties

	dry/cond.		
Molding shrinkage, parallel	0.9 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	1.4 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	769000 / 508000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	16000 / 12300	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	5 / 7.2	%	ISO 527-1/-2
Charpy impact strength, 23°C	23.8 / 30.9	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	2.85 / 4.28	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	505 / *	°F	ISO 11357-1/-3
Glass transition temperature, 10°C/min	176 / 68	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	432 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	491 / *	°F	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	464 / *	°F	ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	0.26 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.417 / *	E-4/°F	ISO 11359-1/-2

Flammability

	dry/cond.		
Glow Wire Flammability Index, 1.0mm	1380 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 2.0mm	1380 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 1.0mm	1380 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 2.0mm	1380 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	1380 / -	°F	IEC 60695-2-13
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	in/min	ISO 3795 (FMVSS 302)

Electrical properties

	dry/cond.		
Dissipation factor, 100Hz	140 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	140 / -	E-4	IEC 62631-2-1
Volume resistivity	1E9 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / >1E15	Ohm	IEC 62631-3-2
Electric strength	584 / -	kV/in	IEC 60243-1

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Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	2.7 / *	%	Sim. to ISO 62
Water absorption, 2mm	6.8 / *	%	Sim. to ISO 62
Density	0.043 / -	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	176	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	563	°F
Min. melt temperature	545	°F
Max. melt temperature	581	°F
Max. screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	158	°F
Max. mold temperature	248	°F
Hold pressure range	7250 - 14500	psi
Hold pressure time	0.0762	s/mil
Hold Pressure Time (h is the max. wall thickness of the part in mm)	h^2+2	s
Back pressure	as low as possible	psi
Ejection temperature	410	°F

Automotive

OEM	STANDARD
Mercedes-Benz	DBL5403 PA66 GF20

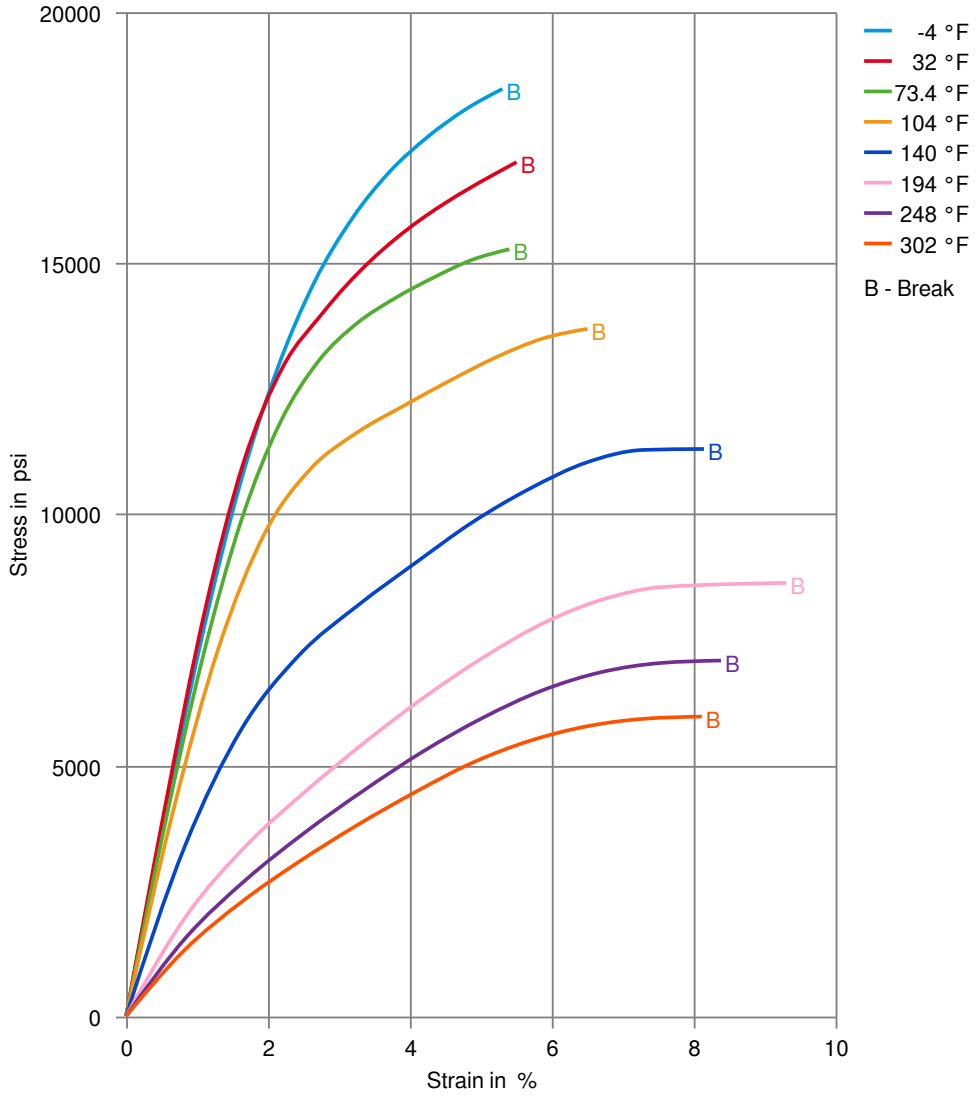
Characteristics

Processing	Injection Molding
Additives	Release agent
Special characteristics	Heat stabilized or stable to heat, Low wear / Low friction

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Stress-strain (dry)

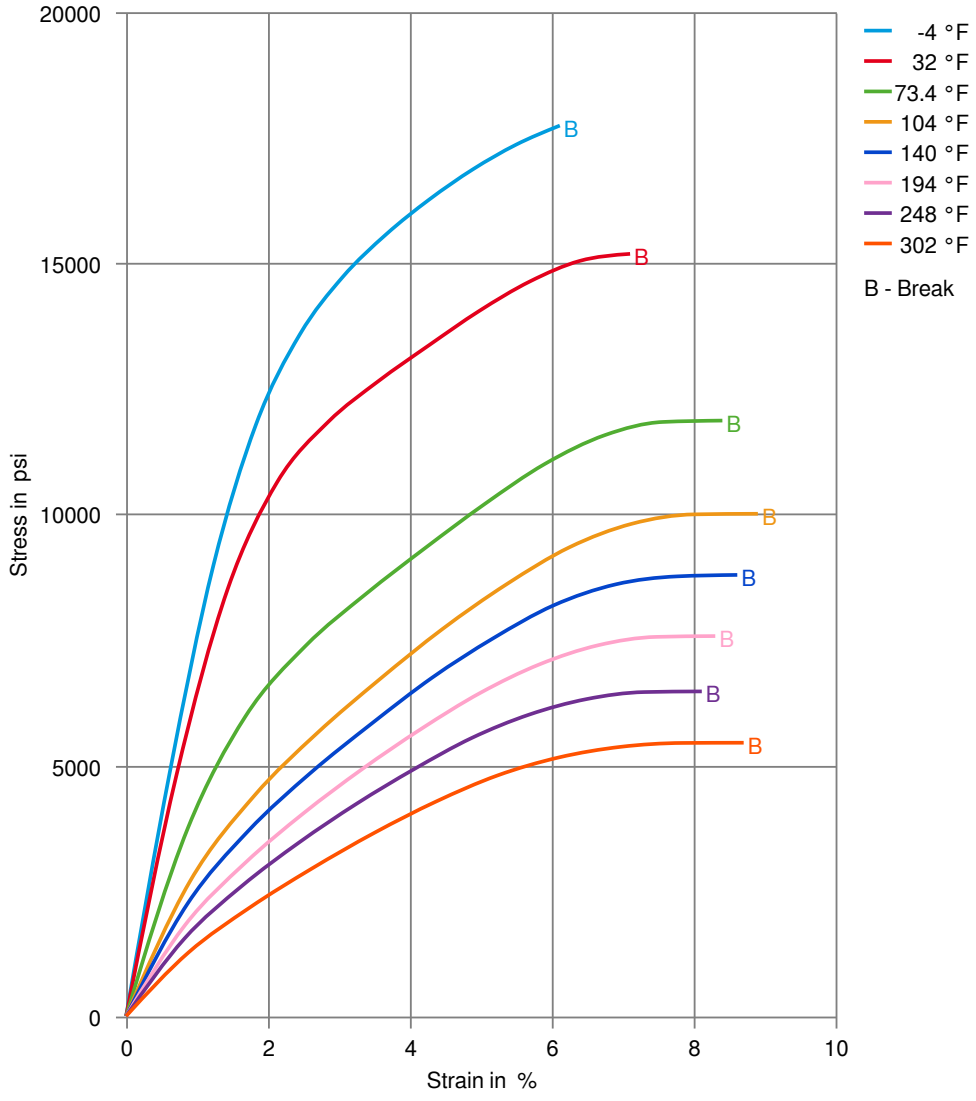


Revised: 2025-04-22 Source: Celanese Materials Database

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Stress-strain (cond.)

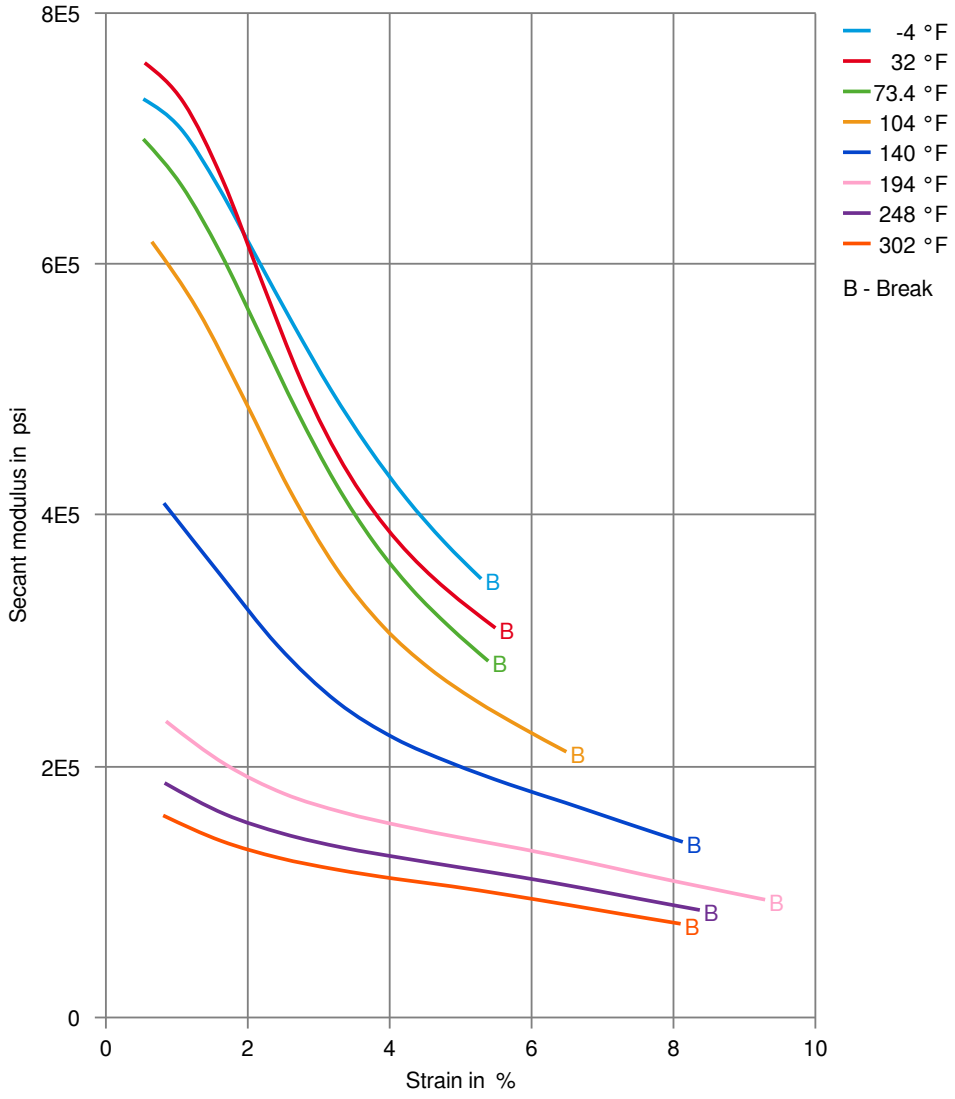


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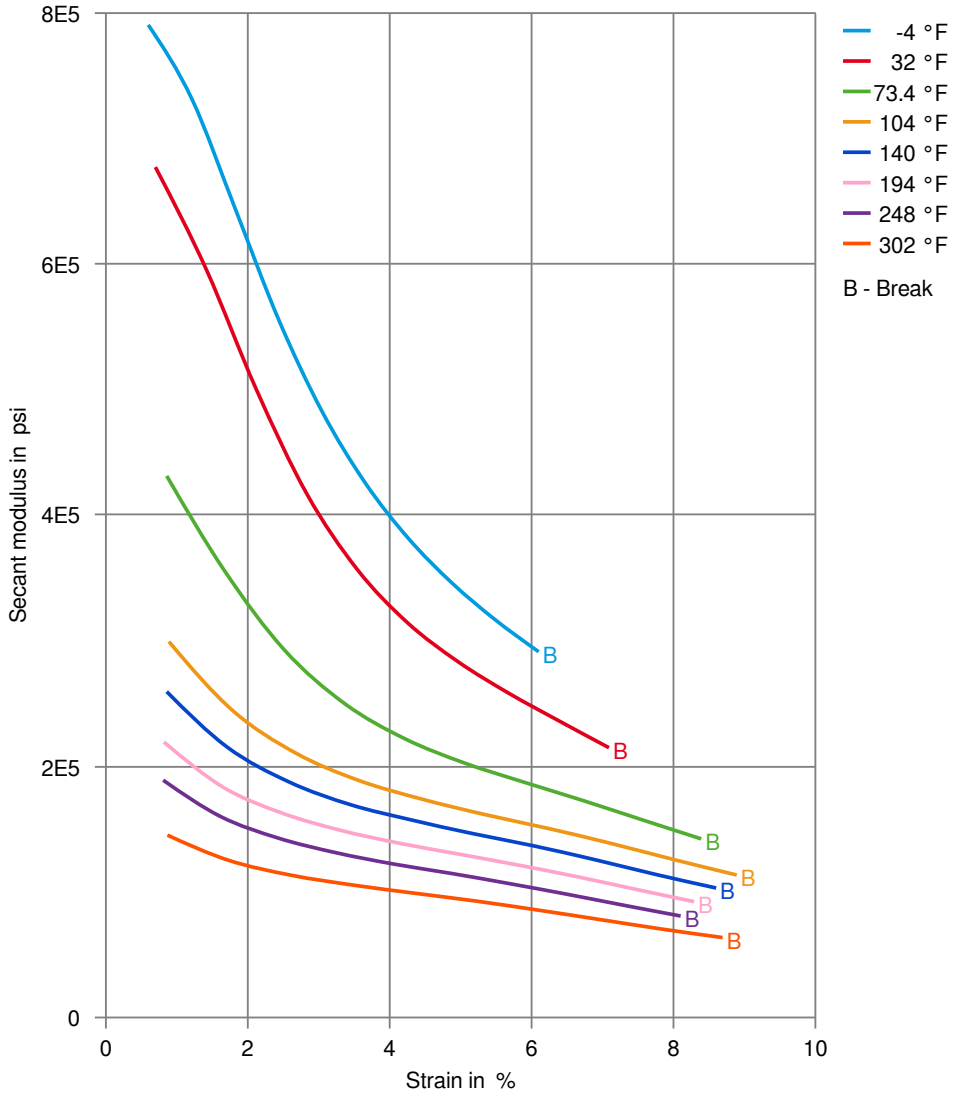
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



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