Zytel® BM74G18HS BK553

NYLON RESIN

Zytel®BM74G18HS BK553 is a 18% Glass Reinforced heat stabilized nylon 66 and nylon 6 comelt resin for blow molding process

Product information

Resin Identification	(PA66+PA6)-I-GF18	ISO 1043
Part Marking Code	>(PA66+PA6)-I-GF18<	ISO 11469
ISO designation	ISO 16396-(PA66+PA6)-I,GF18,BCGH,S14-050	
TGA curve	available	ISO 11358-1

Rheological properties

	dry/cond.		
Melt mass-flow rate	1.2 / *	g/10min	ISO 1133
Melt mass-flow rate, Temperature	527 / *	°F	
Melt mass-flow rate, Load	22 / *	lb	
Viscosity number	3880 / *	in³/lb	ISO 307, 1628
Molding shrinkage, parallel	0.7 / -	%	ISO 294-4, 2577
Molding shrinkage, normal	0.7 / -	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	798000 / 406000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	15000 / 7300	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	3 / 8	%	ISO 527-1/-2
Charpy impact strength, 23°C	30.9 / -	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	8.09 / -	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	2.85 / -	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -40°C	2.85 / -	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	500 / *	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	419 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	473 / *	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.24 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.722 / *	E-4/°F	ISO 11359-1/-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB / *[A]	class	IEC 60695-11-10
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	in/min	ISO 3795 (FMVSS 302)

[A]: Assessed

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	2.2 / *	%	Sim. to ISO 62
Density	0.044 / -	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	≤0.2	%
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	194	°F
Min. mold temperature	122	°F
Max. mold temperature	212	°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
Ejection temperature	410	°F

Extrusion

Drying Temperature	≤176	°F
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.03	%
Melt Temperature Optimum	545	°F
Melt Temperature Range	527 - 554	°F

Blow Molding

Drying Recommended	yes	
Drying Temperature	212 - 239	°F
Drying Time, Dehumidified Dryer	4 - 6	h
Processing Moisture Content	≤0.03	%
Melt Temperature Optimum	545	°F
Melt Temperature Range	527 - 563	°F
Swell ratio	1.5	
Mold Temperature Optimum	212	°F
Mold Temperature Range	86 - 212	°F

Automotive

OEM	ADDITIONAL INFORMATION
General Motors	Black; Part Specific Approval, Please Contact Your CE Representative For More Details.
Renault-Nissan	UB02b, No Spec, Special Part Approval, See Your CE Account Manager.

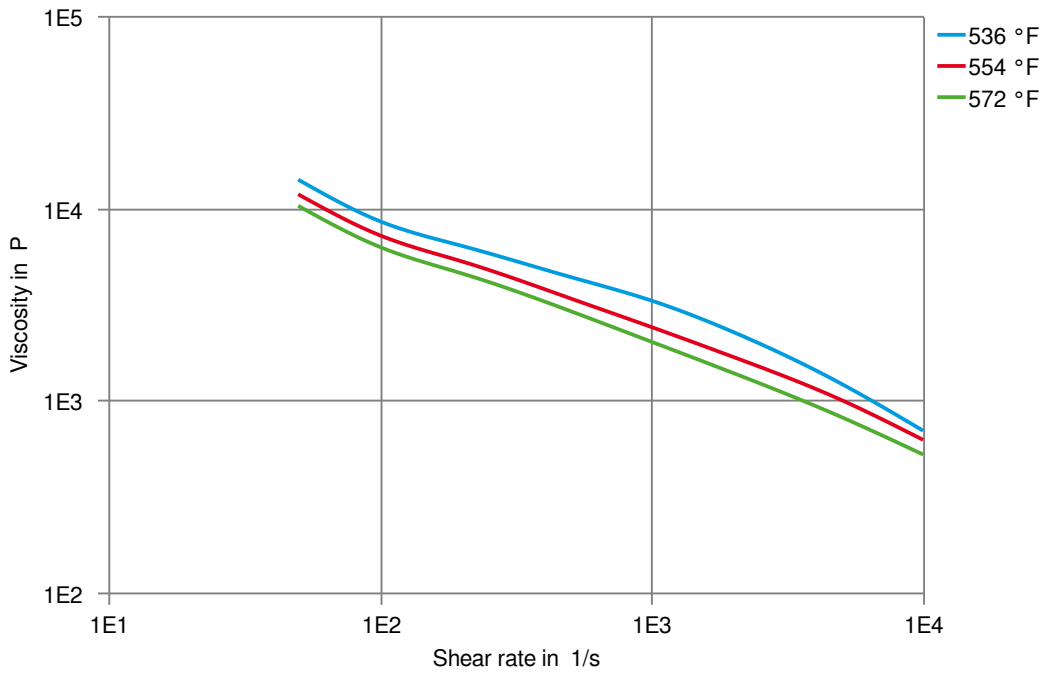
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Characteristics

Processing	Blow Molding
Special characteristics	Heat stabilized or stable to heat

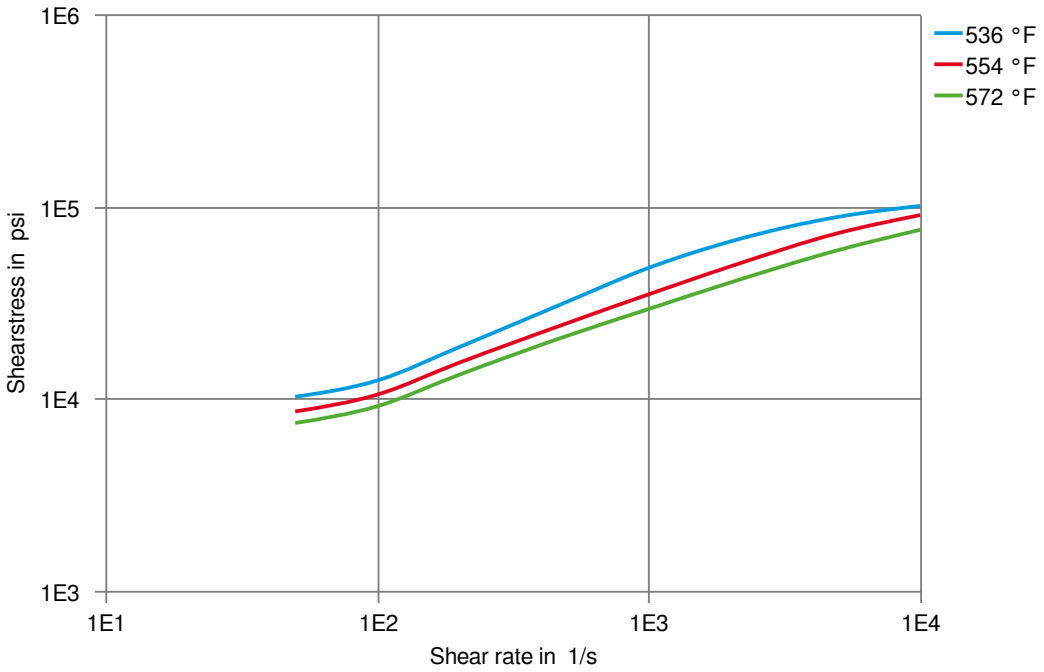
Viscosity-shear rate



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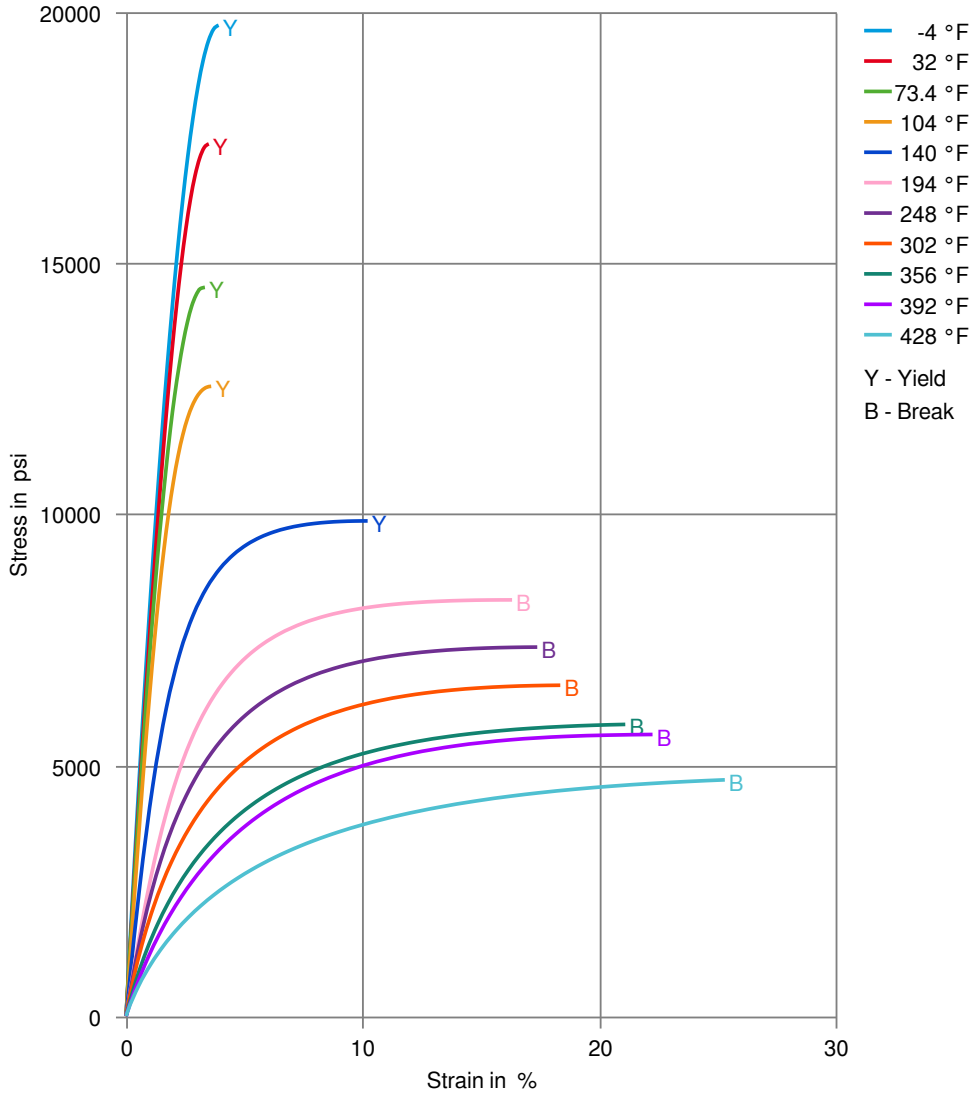
Shearstress-shear rate



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Stress-strain (dry)

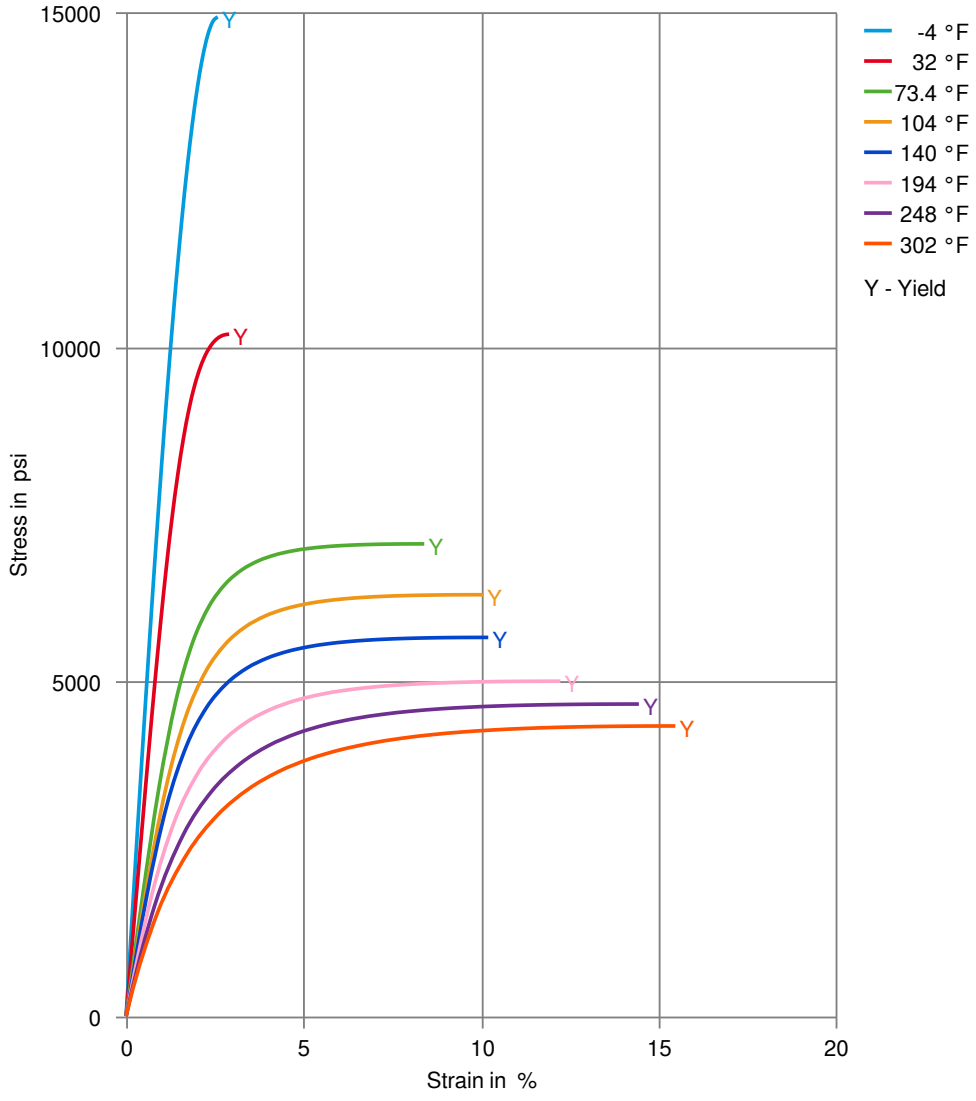


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Stress-strain (cond.)

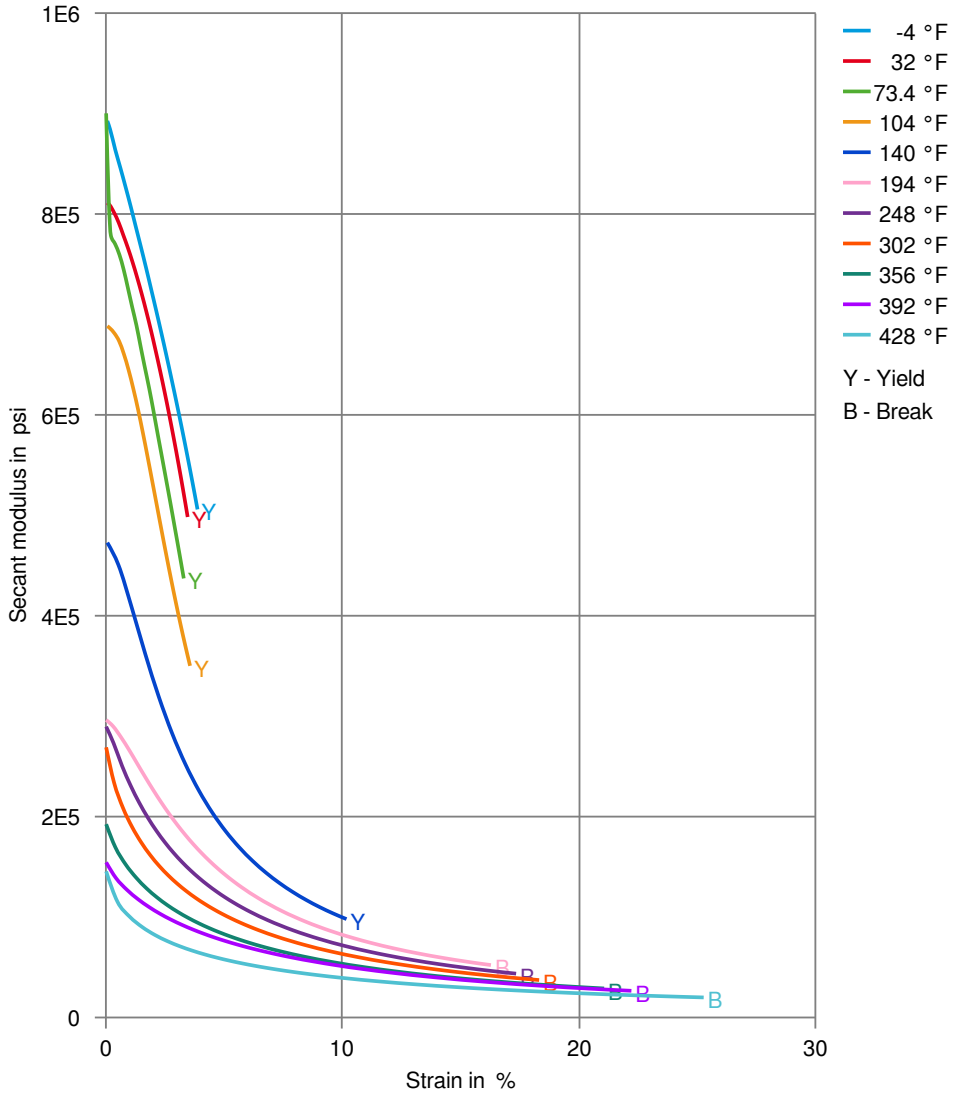


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Secant modulus-strain (dry)

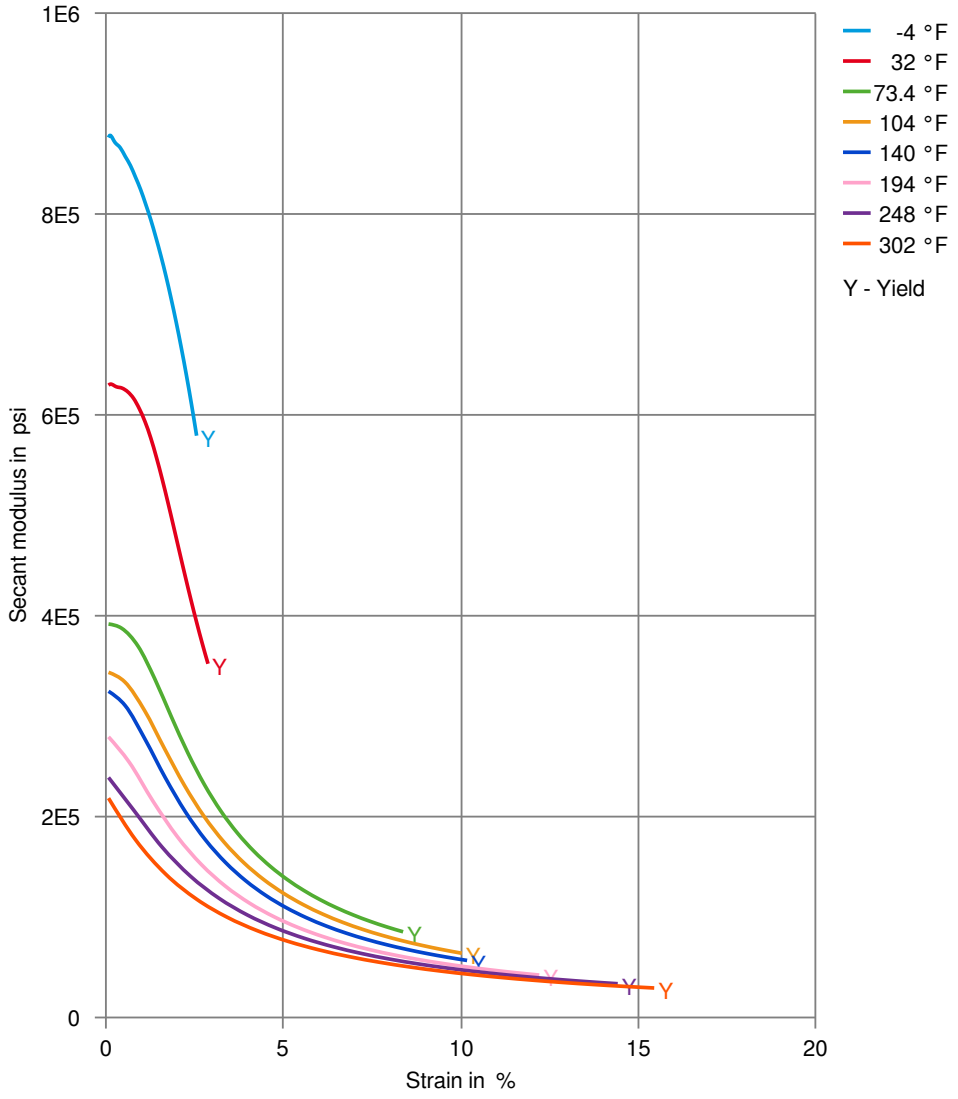


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Secant modulus-strain (cond.)



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