FRIANYL® A3 W GF30 V0E BK 9004/YG

FRIANYL®

Designed for Electrical applications requiring self-extinguishing properties combined with good mechanical performances, this grade meets the most stringent safety requirements for insulating materials. Ideal for thicker walled parts.

Product information

Resin Identification	(PA66+PA6)-GF30 FR(40)	ISO 1043
Part Marking Code	>(PA66+PA6)-GF30 FR(40)<	ISO 11469
Continuous Service Temperature	266 °F	IEC 60216-1

Typical mechanical properties

	dry/cond.		
Tensile modulus	1.52E6 / 943000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	21000 / 14500	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5 / 5	%	ISO 527-1/-2
Charpy impact strength, 23 °C	30.9 / 30.9	ftlb/in²	ISO 179/1eU
Charpy impact strength, -30 °C	28.5 / 28.5	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23 °C	4.52 / 7.14	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30 °C	3.57 / 3.57	ftlb/in²	ISO 179/1eA

Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	495 / *	°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
UL recognition	yes / *		UL 94
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.1181 / *	in	IEC 60695-11-10
UL recognition	yes / *		UL 94
Glow Wire Flammability Index, 0.75mm	1760 / -	°F	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	1760 / -	°F	IEC 60695-2-12

Electrical properties

	dry/cond.		
Volume resistivity	1E14 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric strength	1140 / -	kV/in	IEC 60243-1
Electric strength, Direct Current	475	kV/in	IEC 60243-2
Comparative tracking index	600 / -		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.4 / *	%	Sim. to ISO 62
Water absorption, 2mm	4.9 / *	%	Sim. to ISO 62
Density	0.0509 / -	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	≤0.1	%
Melt Temperature Optimum	545	°F
Min. melt temperature	518	°F
Max. melt temperature	572	°F
Max. screw tangential speed	≤0.2	m/s
Mold Temperature Optimum	176	°F
Min. mold temperature	140	°F
Max. mold temperature	212	°F
Ejection temperature	408	°F

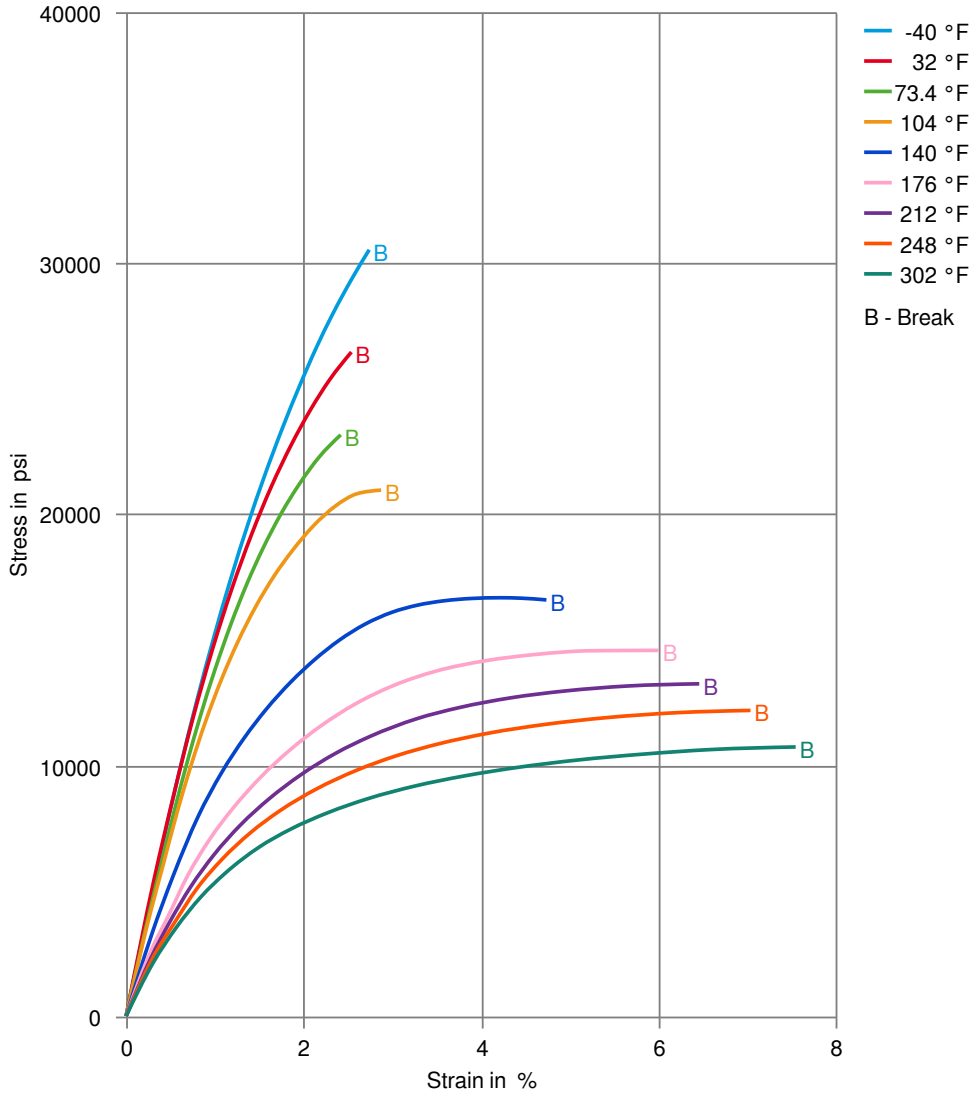
Characteristics

Processing	Injection Molding
Additives	Flame retardant, Non-halogenated/Red phosphorus free flame retardant, Low halide content
Special characteristics	Flame retardant, Heat stabilized or stable to heat, Laser Markable

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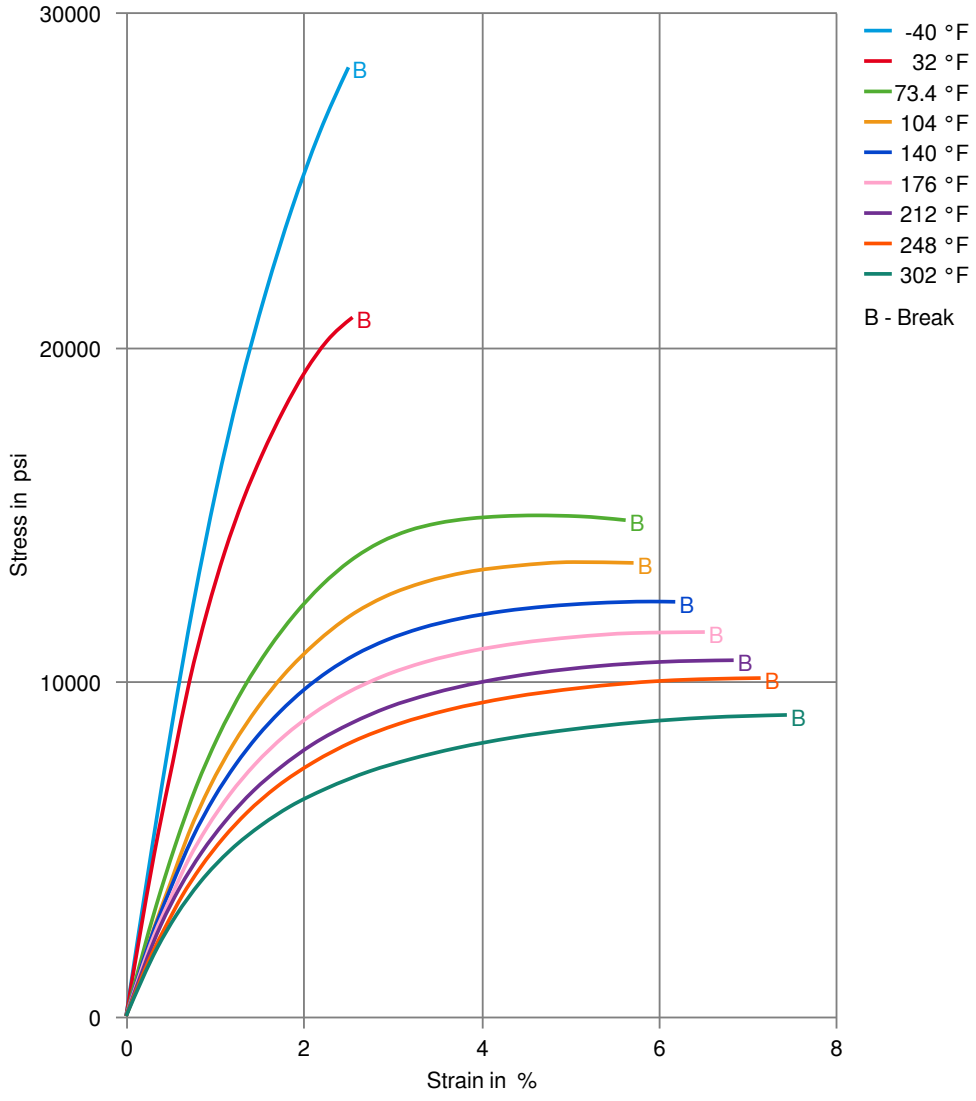
Stress-strain (dry)



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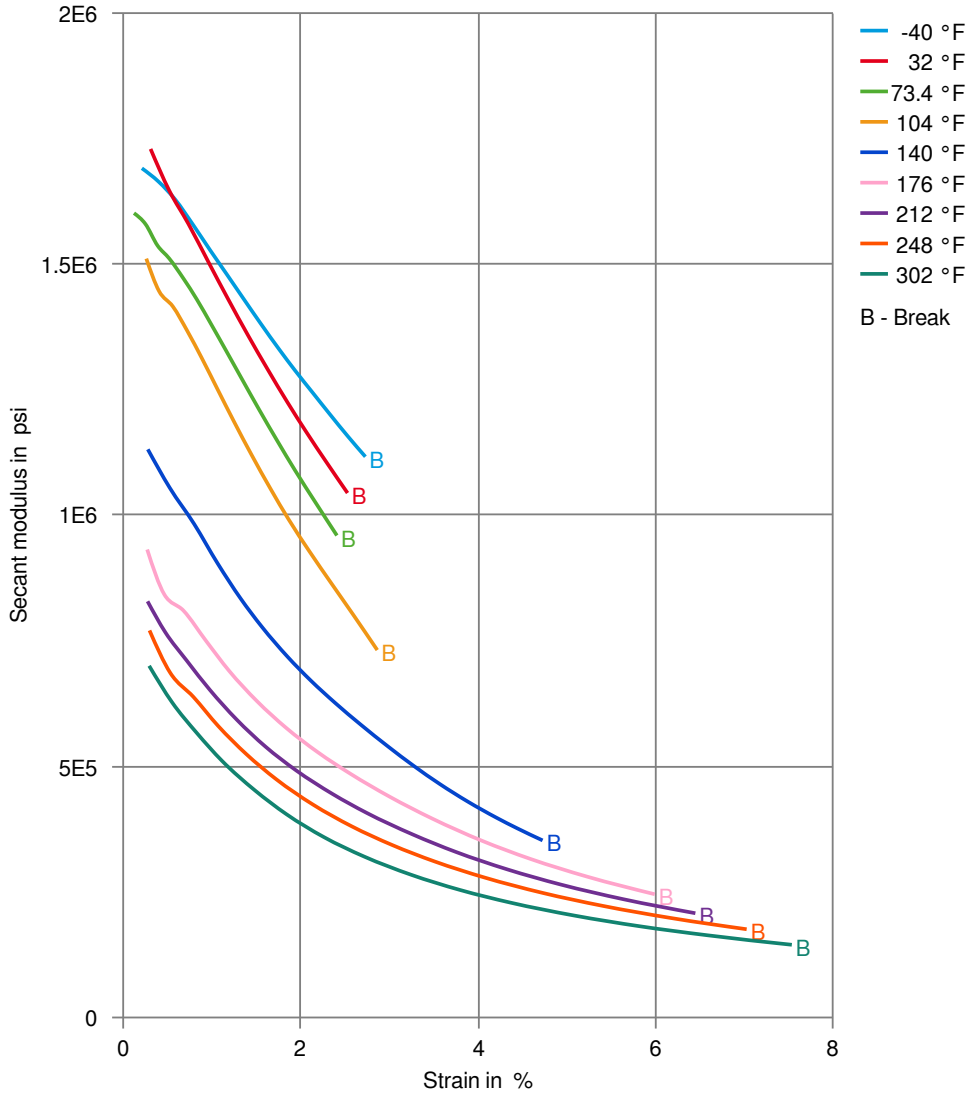
Stress-strain (cond.)



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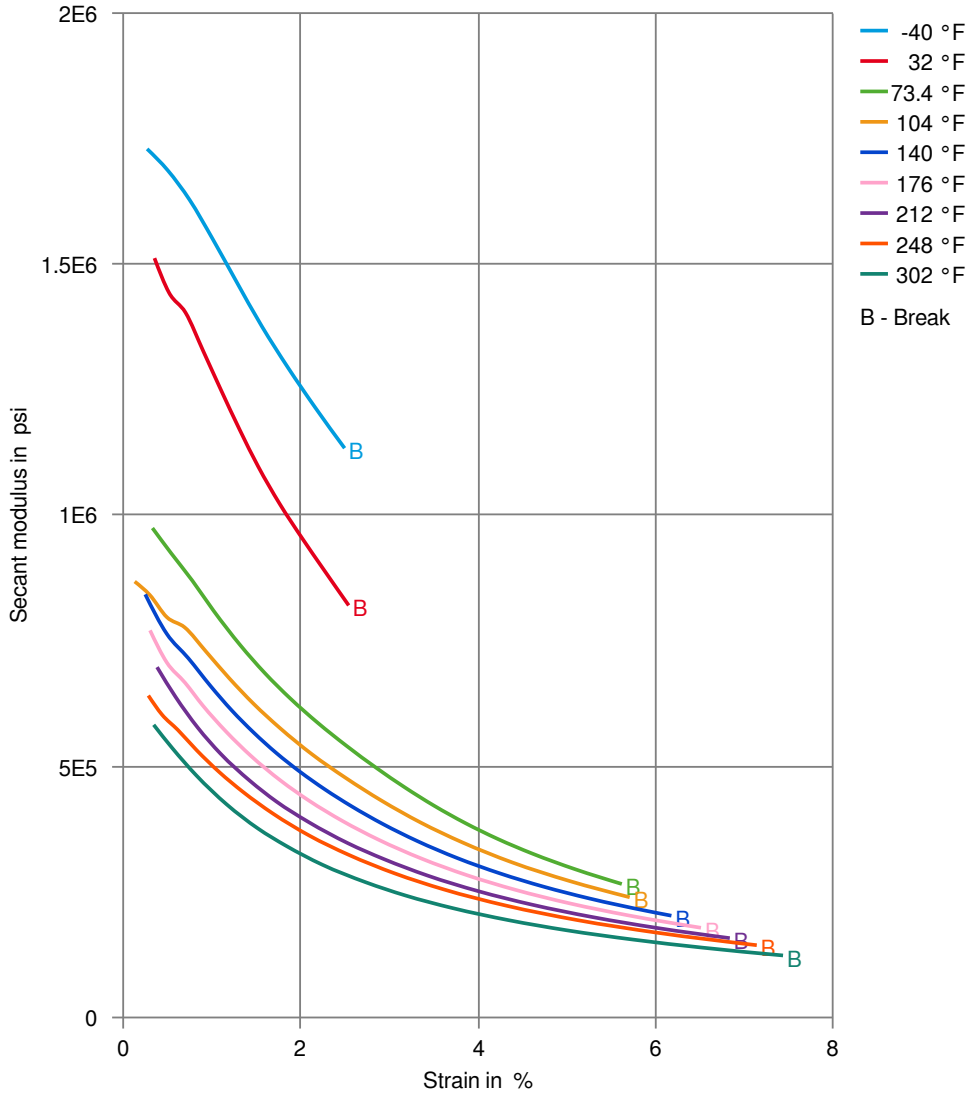
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



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