FRIANYL® A3 W GF30 V0E BK 9005

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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
Coefficient of linear thermal expansion (CLTE), parallel	0.09 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), Parallel, 23-55°C(73-130°F)	0.117 / -	E-4/°F	ASTM E 831
Coefficient of linear thermal expansion (CLTE), parallel, -40-23°C	0.106 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel, 55-160°C	0.0833 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.572 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), Normal,23-55°C (73-130°F)	0.428 / -	E-4/°F	ASTM E 831
Coefficient of linear thermal expansion (CLTE), normal, -40-23°C	0.356 / *	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal, 55-160°C	0.75 / *	E-4/°F	ISO 11359-1/-2

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

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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/in^3	ISO 1183

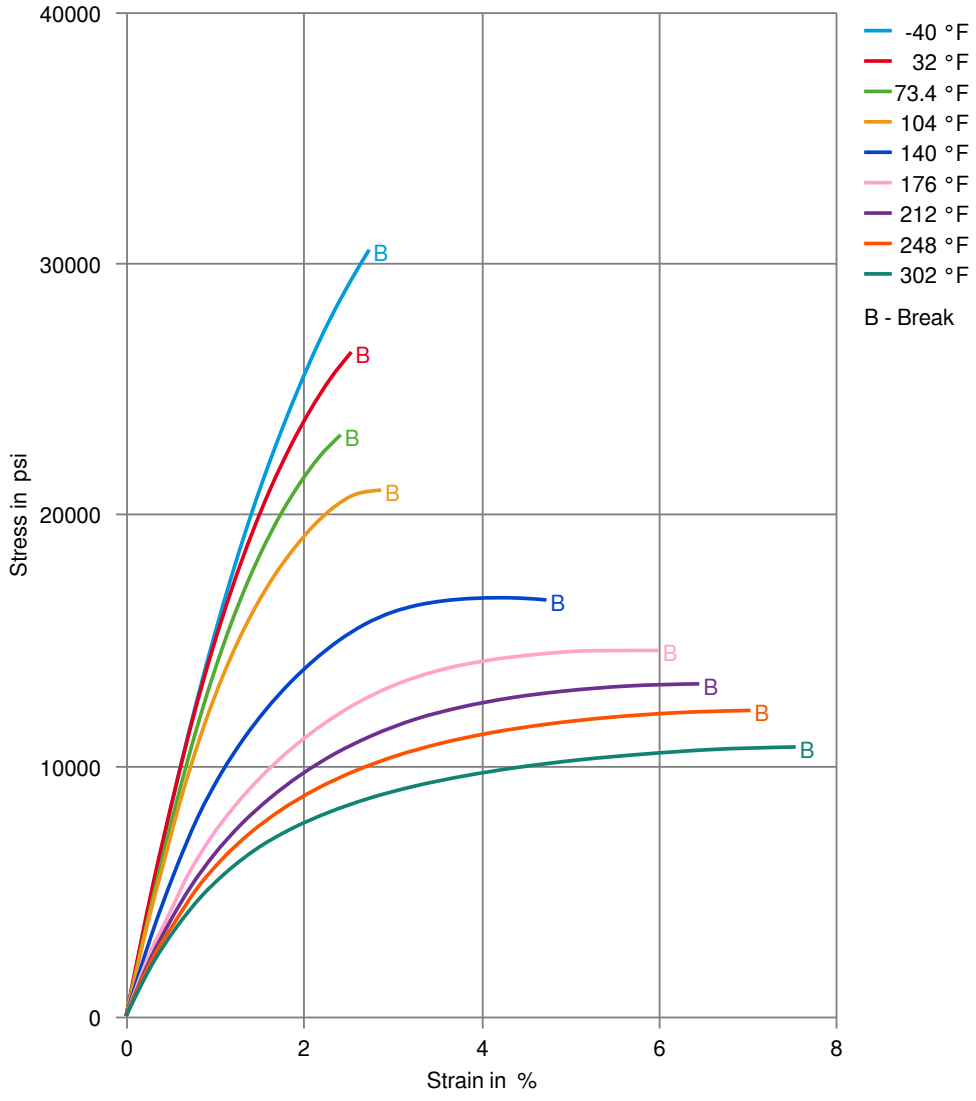
Characteristics

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, Thermal shock resistant

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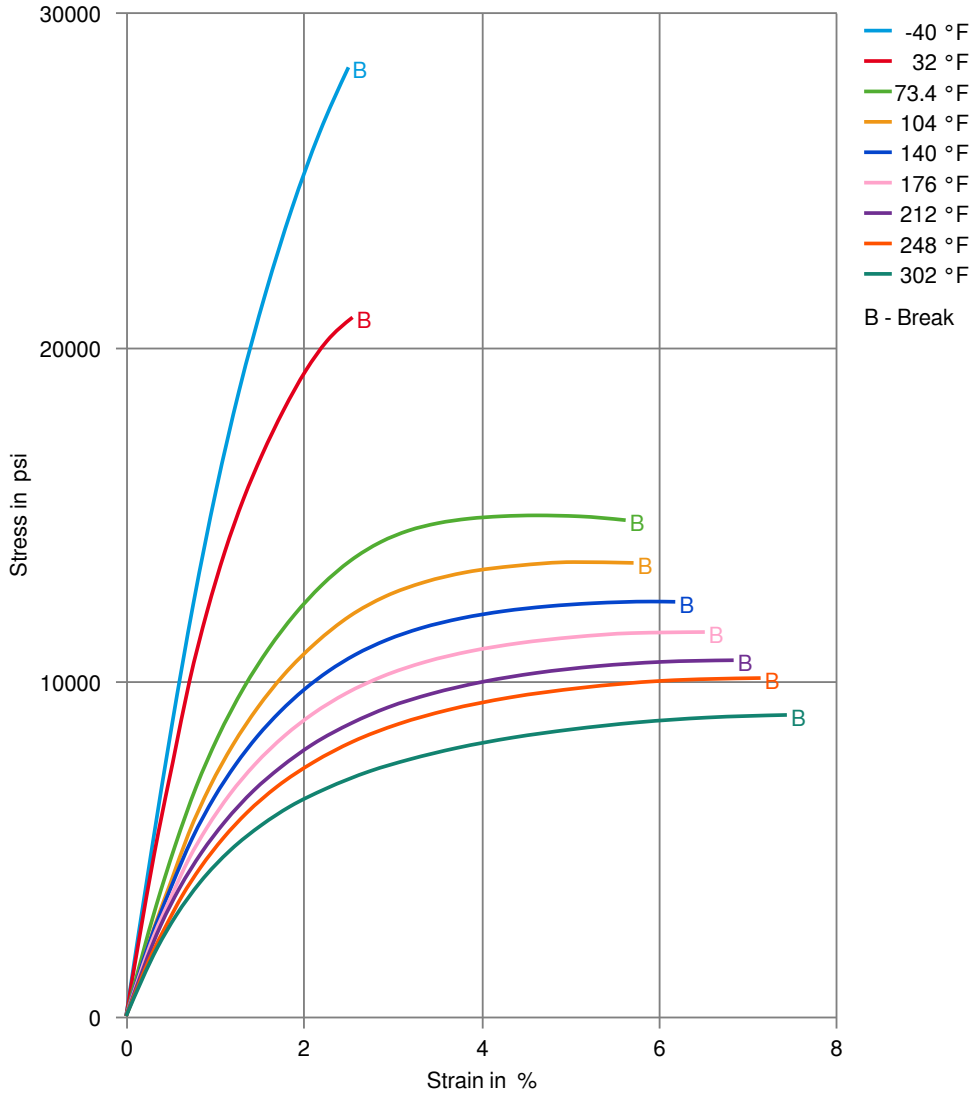
Stress-strain (dry)



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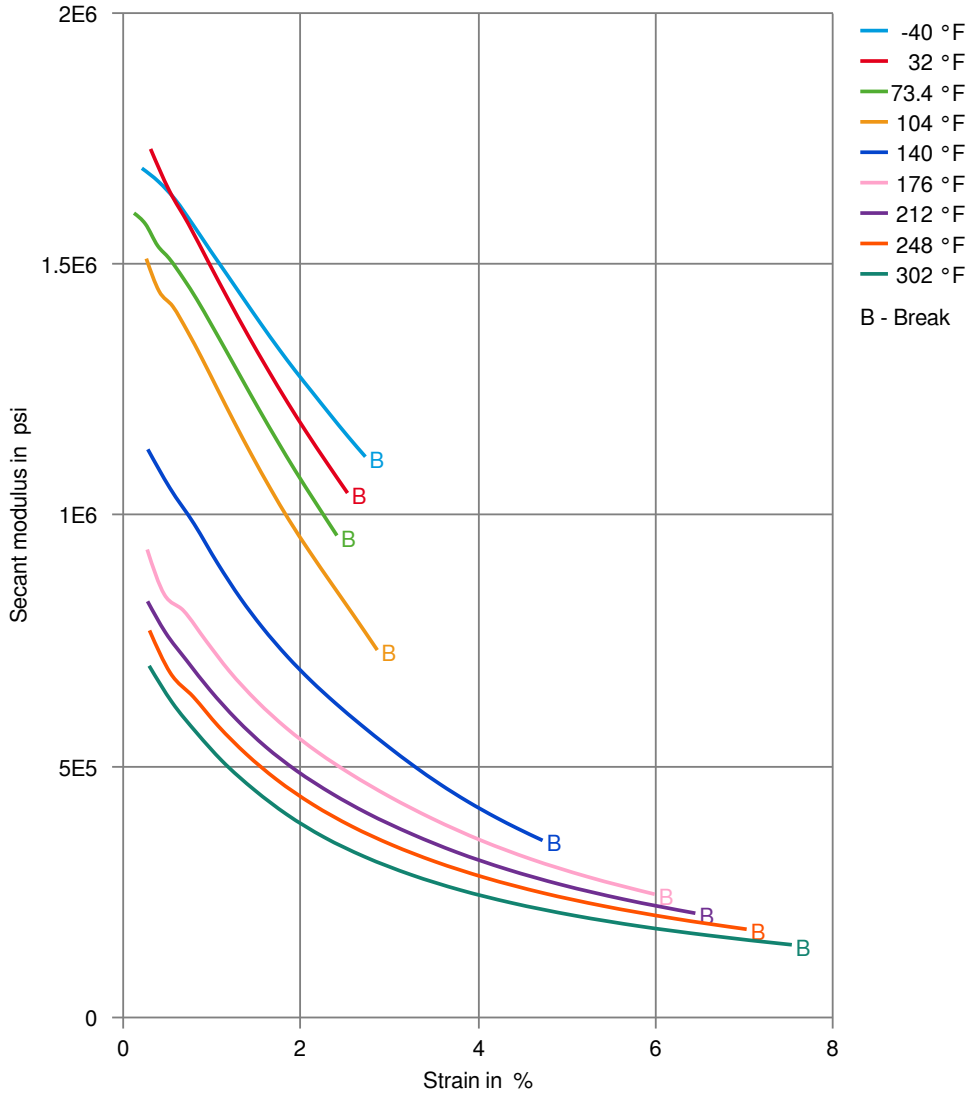
Stress-strain (cond.)



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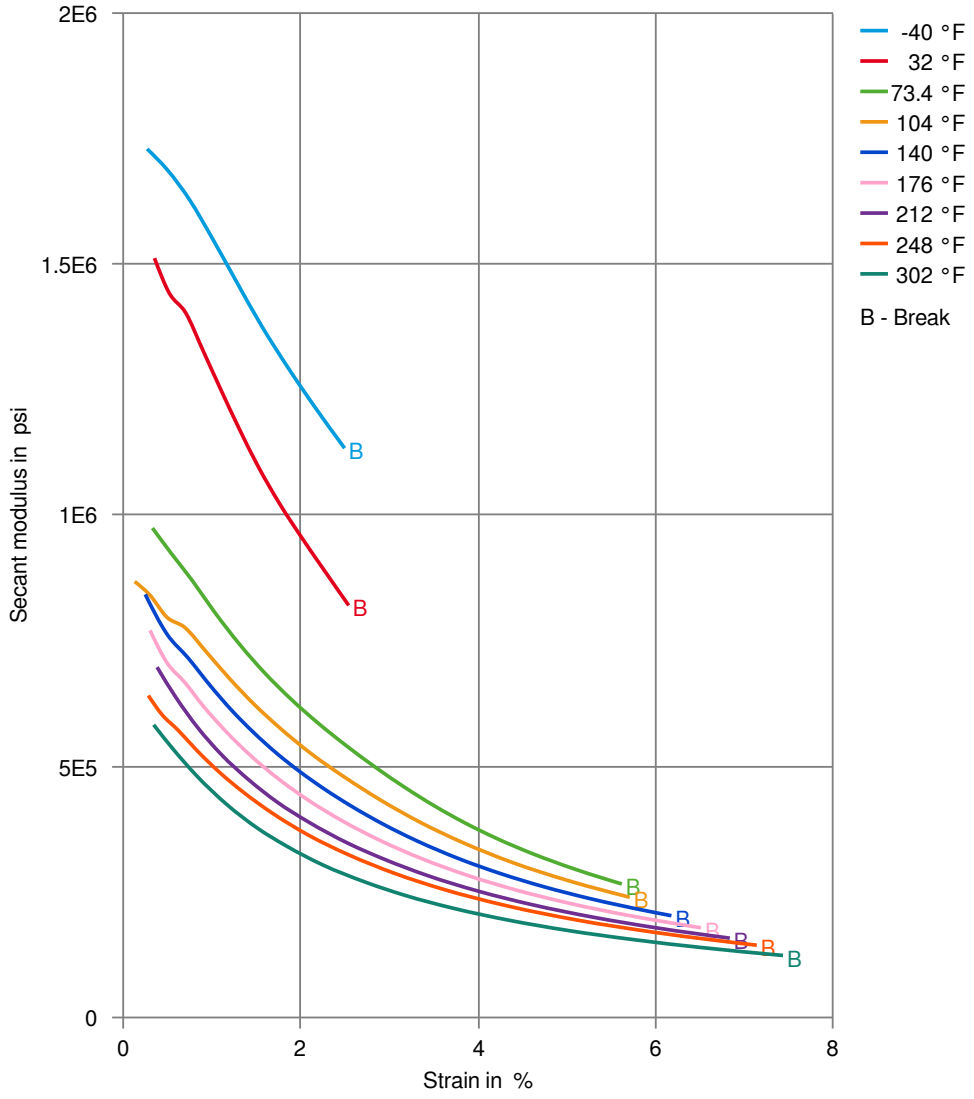
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



Revised: 2026-06-09 Source: Celanese Materials Database

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