FRIANYL® A3 GF25 V0 NC 1102

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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.

Product information

Resin Identification	(PA66+PA6)-GF25 FR(40)	ISO 1043
Part Marking Code	>(PA66+PA6)-GF25 FR(40)<	ISO 11469
Continuous Service Temperature	266 °F	IEC 60216-1

Rheological properties

	dry/cond.		
Melt volume-flow rate	65 / *	cm^3/10min	ISO 1133
Temperature	527 / *	°F	
Load	11 / *	lb	
Viscosity number	3600 / *	in^3/lb	ISO 307, 1628
Molding shrinkage range, parallel	0.3 - 0.6	%	ISO 294-4, 2577
Molding shrinkage range, normal	0.6 - 0.9	%	ISO 294-4, 2577

Typical mechanical properties

	dry/cond.		
Tensile modulus	1.31E6 / 847000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	19600 / 13100	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3 / 5.8	%	ISO 527-1/-2
Flexural modulus	1.31E6 / 847000	psi	ISO 178
Flexural strength	30500 / 21800	psi	ISO 178
Flexural strain at failure	3.2 / 5	%	ISO 178
Charpy impact strength, 23°C	28.5 / >60	$ftlb/in^2$	ISO 179/1eU
Charpy notched impact strength, 23°C	4.76 / 7.14	$ftlb/in^2$	ISO 179/1eA
Charpy notched impact strength, -30°C	3.57 / -	$ftlb/in^2$	ISO 179/1eA
Ball indentation hardness, H 961/30	31200 / -	psi	ISO 2039-1

Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	500 / *	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	410 / *	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	428 / *	°F	ISO 75-1/-2
Ball pressure test	347 / -	°F	IEC 60695-10-2

Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	V-0 / *	class	IEC 60695-11-10
Burning Behav. at thickness h	V-0 / *	class	IEC 60695-11-10
Thickness tested	0.0157 / *	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
Glow Wire Ignition Temperature, 0.75mm	1430 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	1470 / -	°F	IEC 60695-2-13
FMVSS Class	SE		ISO 3795 (FMVSS 302)

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Electrical properties

	dry/cond.		
Volume resistivity	1E15 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1E13	Ohm	IEC 62631-3-2
Electric strength	1140 / -	kV/in	IEC 60243-1
Comparative tracking index	600 / -		IEC 60112

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.5 / *	%	Sim. to ISO 62
Water absorption, 2mm	5.2 / *	%	Sim. to ISO 62
Density	0.0491 / -	lb/in³	ISO 1183

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

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
VW Group	VW 50133	*Best Fitting Grade To PA66-5-A, Not Officially Approved

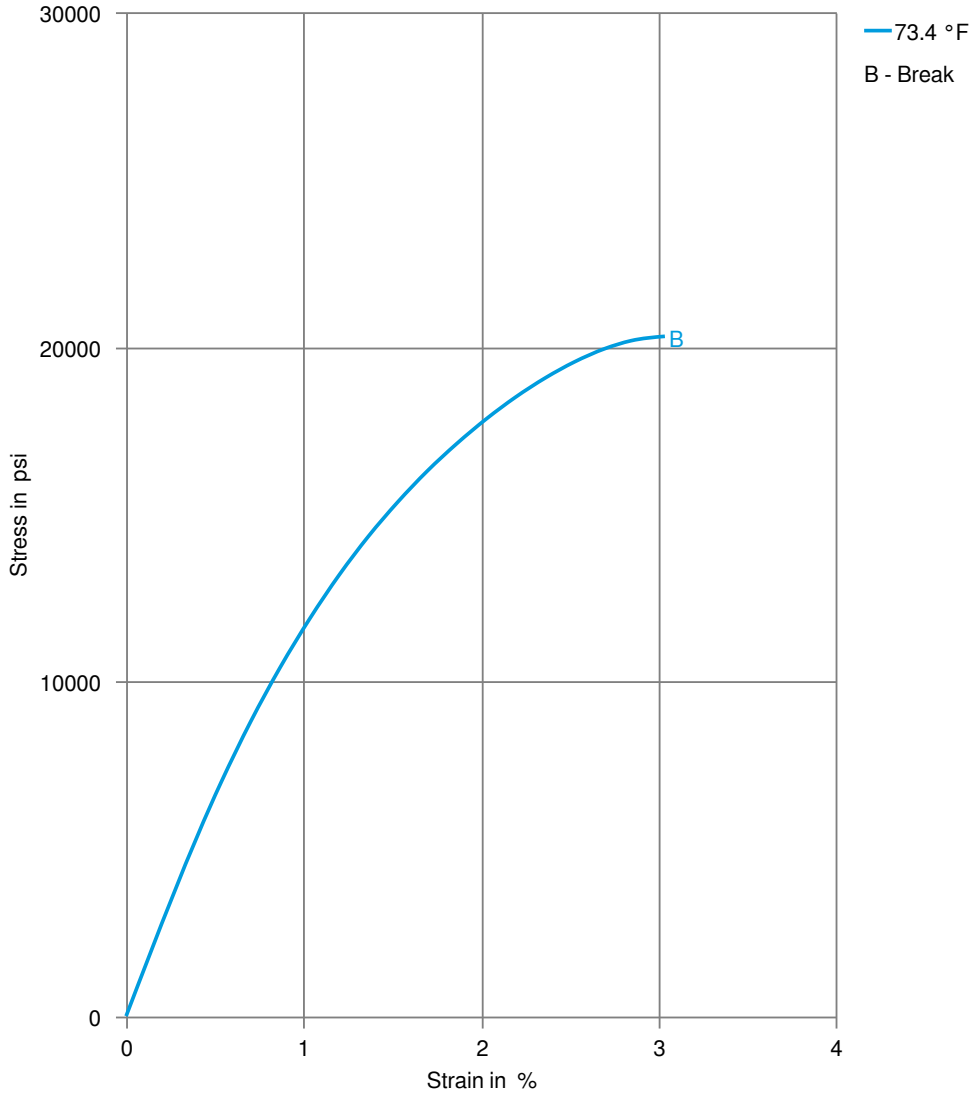
Characteristics

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

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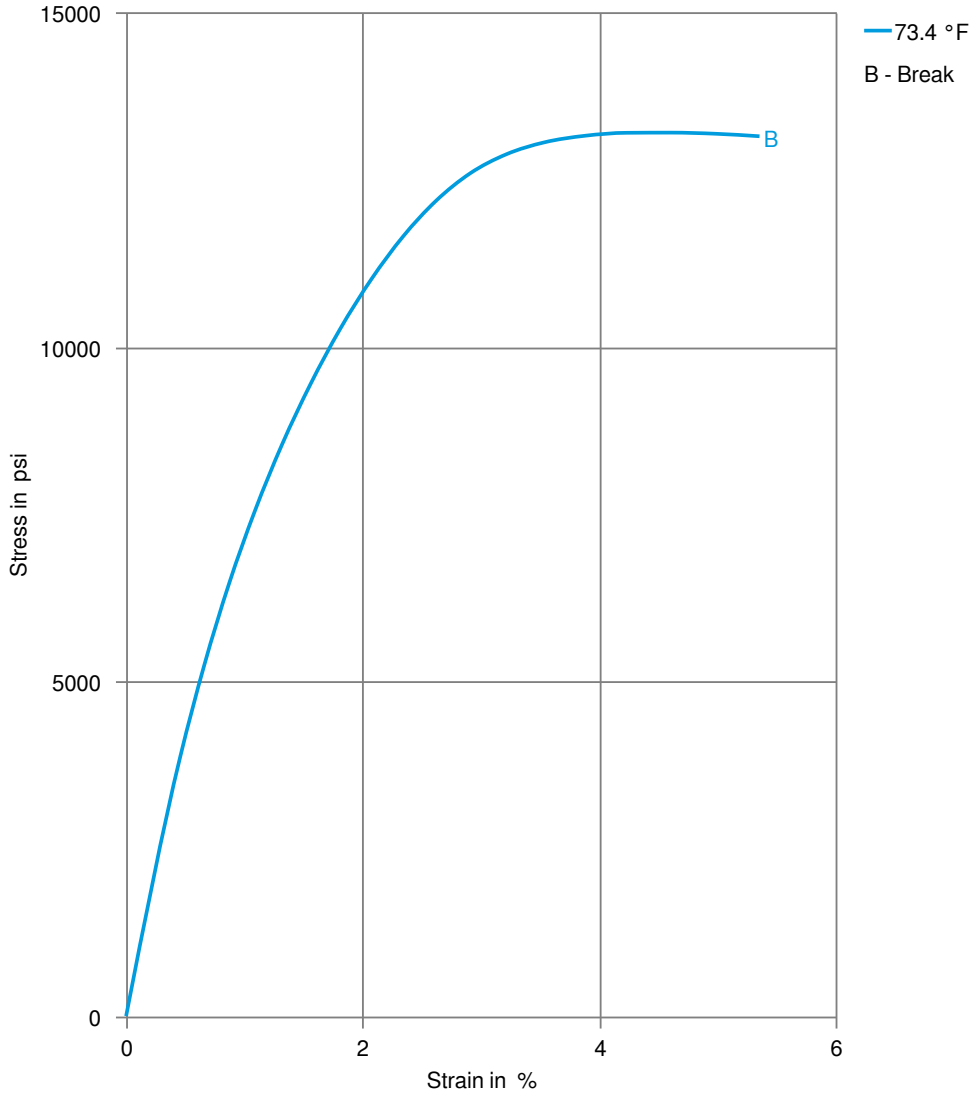
Stress-strain (dry)



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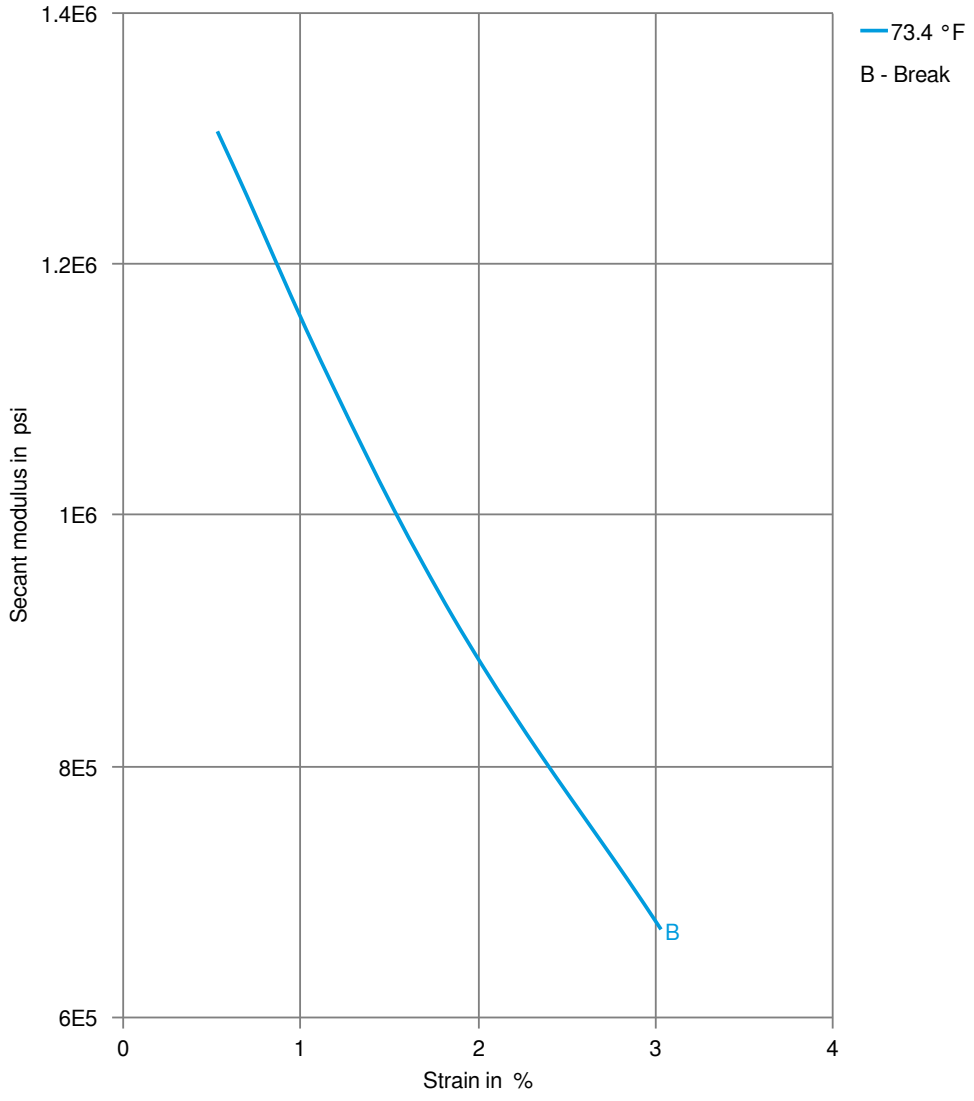
Stress-strain (cond.)



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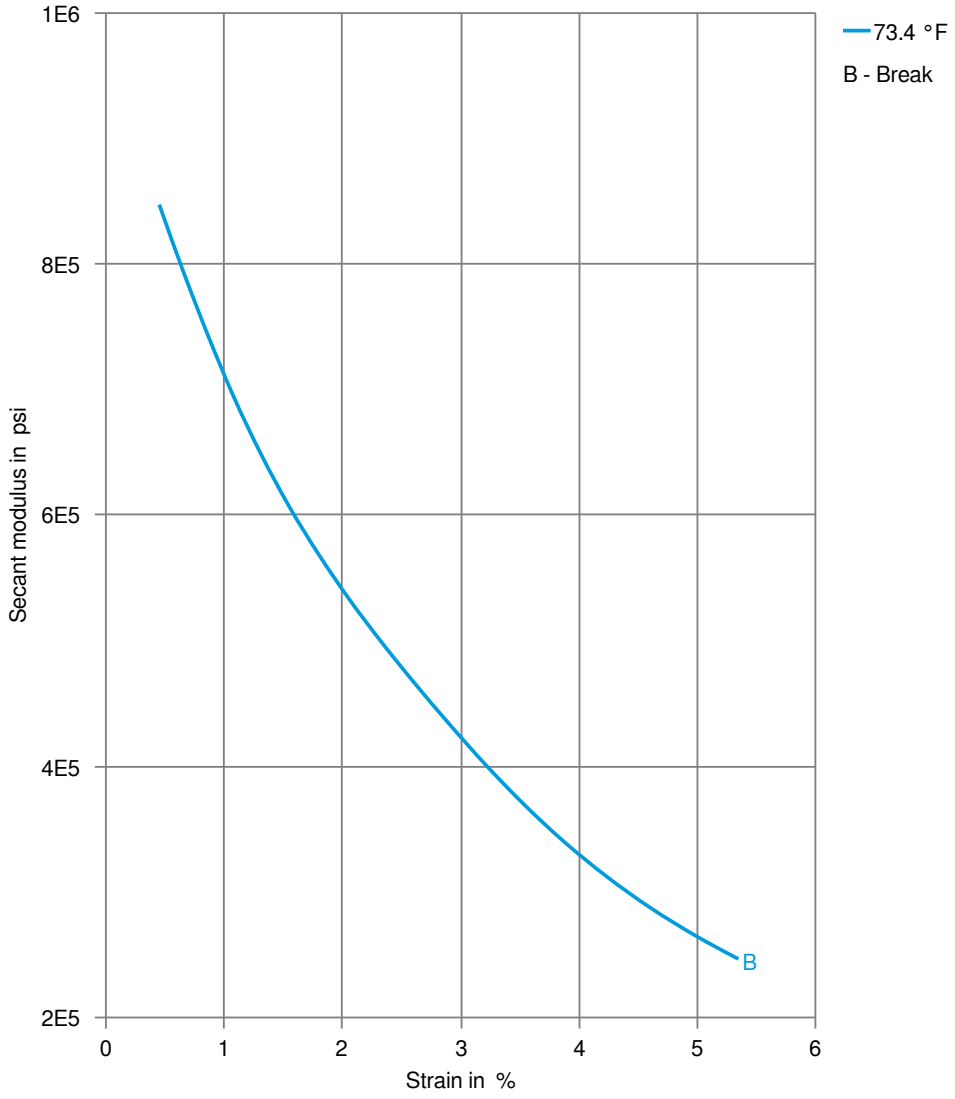
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



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