FRIANYL® A3 GF25 V0

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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.		
Viscosity number	3600 / *	in³/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 / 914000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	18900 / 13100	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3.5 / 6.5	%	ISO 527-1/-2
Flexural modulus	1.31E6 / 870000	psi	ISO 178
Flexural strength	29700 / 21800	psi	ISO 178
Flexural strain at failure	3 / -	%	ISO 178
Charpy impact strength, 23 °C	28.5 / >60	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23 °C	4.28 / 5.71	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30 °C	3.57 / -	ftlb/in²	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	455 / *	°F	ISO 75-1/-2
Ball pressure test	347 / -	°F	IEC 60695-10-2
RTI, electrical, 0.4mm	248	°F	UL 746B
RTI, electrical, 0.75mm	266	°F	UL 746B
RTI, electrical, 1.5mm	266	°F	UL 746B
RTI, electrical, 3.0mm	266	°F	UL 746B
RTI, impact, 0.75mm	194	°F	UL 746B
RTI, impact, 1.5mm	194	°F	UL 746B
RTI, impact, 3.0mm	194	°F	UL 746B
RTI, strength, 0.75mm	266	°F	UL 746B
RTI, strength, 1.5mm	266 / *	°F	UL 746B
RTI, strength, 3.0mm	266	°F	UL 746B

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, 0.4mm	1760 / -	°F	IEC 60695-2-12

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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, 0.4mm	1380 / -	°F	IEC 60695-2-12
Glow Wire Ignition Temperature, 1.5mm	1470 / -	°F	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	1470 / -	°F	IEC 60695-2-13
Hot Wire Ignition, 0.75mm	PLC 0 / *	s	UL 746A
Hot Wire Ignition, 1.5mm	PLC 0 / *	s	UL 746A
Hot Wire Ignition, 3mm	PLC 0 / *	s	UL 746A
FMVSS Class	SE		ISO 3795 (FMVSS 302)
Railway classification	R22 / R24		EN 45545-2
Railway classification rating	HL3 / HL3		EN 45545-2

Electrical properties

	dry/cond.		
Volume resistivity	>1E13 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric strength	1170 / -	kV/in	IEC 60243-1
Comparative tracking index	600 / -		IEC 60112
High Amperage Arc Ignition Category, 1.5 mm	PLC 0 / *	class	UL 746A

Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.4 / *	%	Sim. to ISO 62
Water absorption, 2mm	4.9 / *	%	Sim. to ISO 62
Density	0.0491 / -	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
Ejection temperature	388	°F

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Renault	UB22a, BB/YG, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	UB22b, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	UB22c, No Spec, Special Part Approval, See Your CE Account Manager.	

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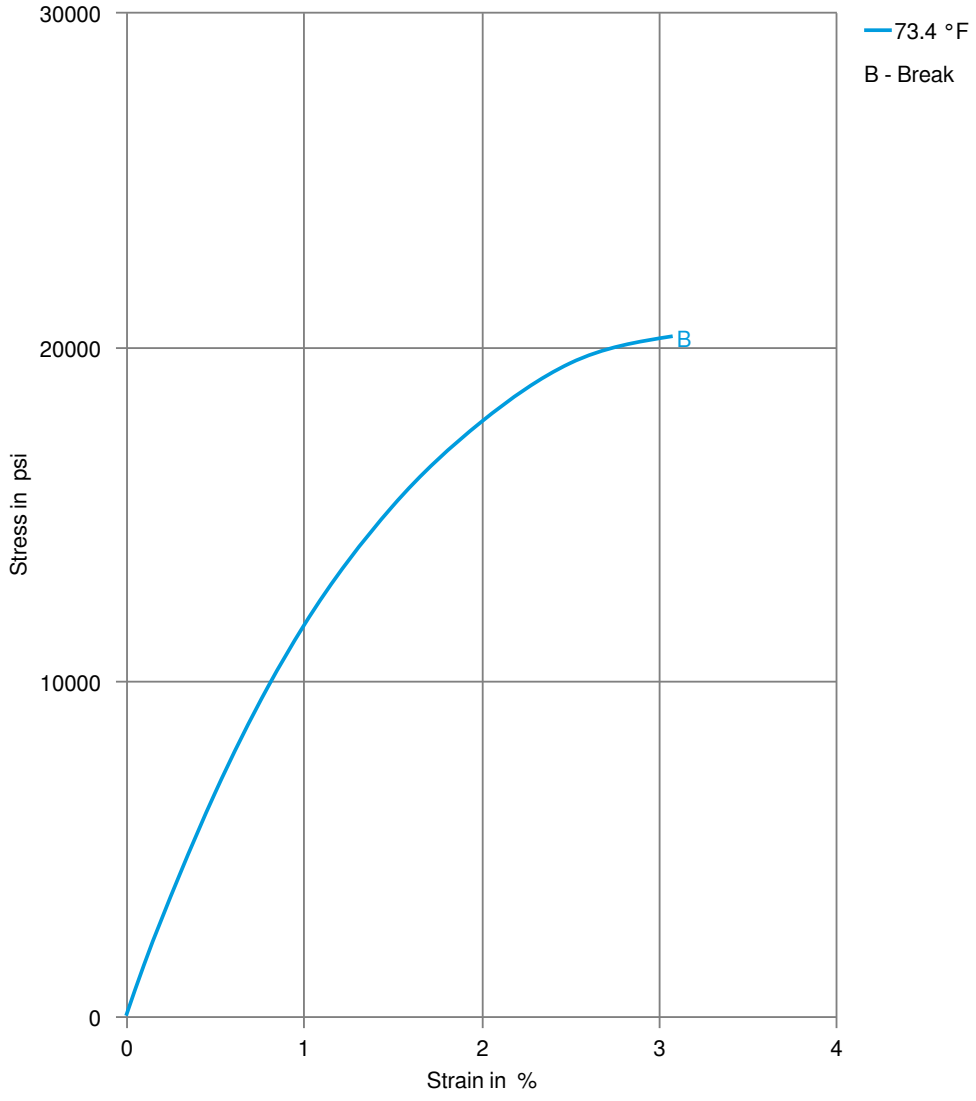
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Renault	UB22d, No Spec, Special Part Approval, See Your CE Account Manager.	
Stellantis	B62 0300 / 61/221E/215M/C4	01378_20_00622
VW Group	VW 50133	*Best Fitting Grade To PA66-5-A, Not Officially Approved

Characteristics

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

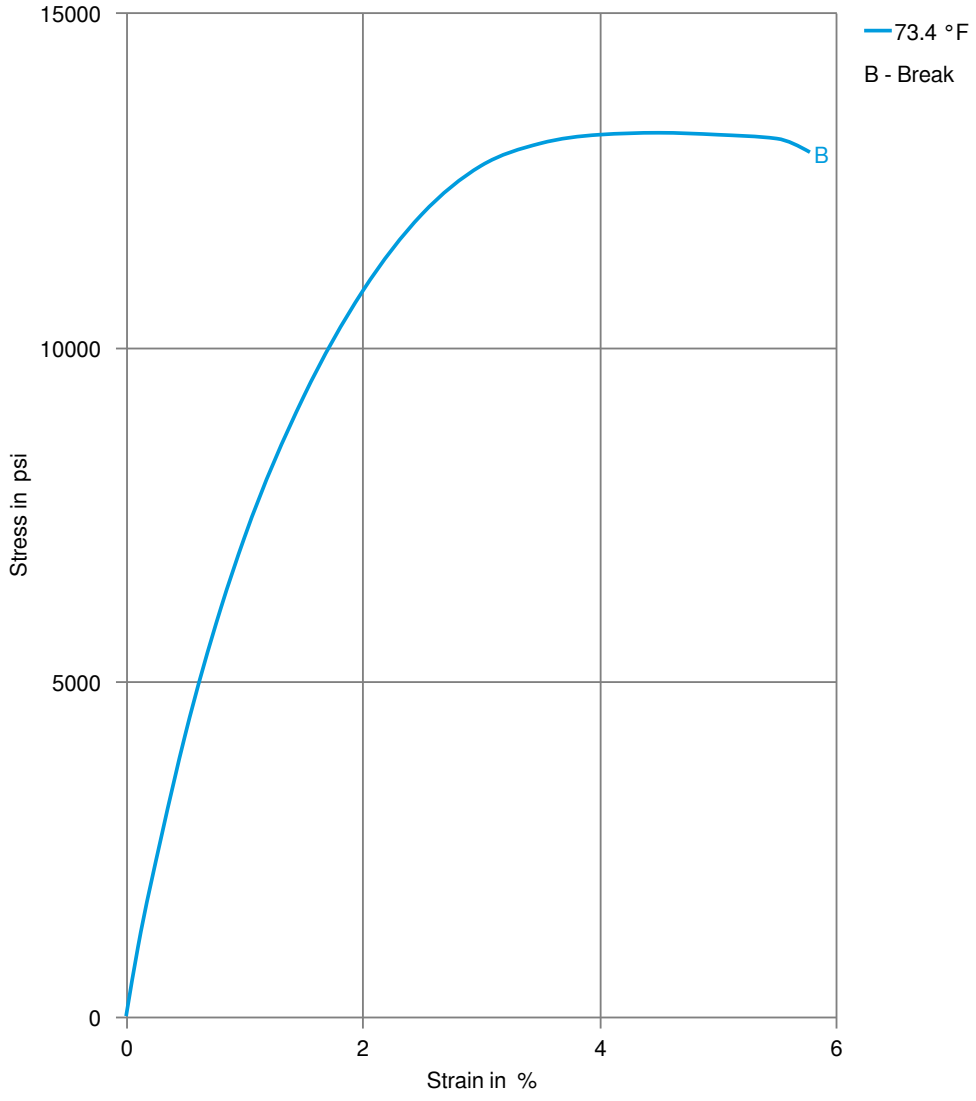
Stress-strain (dry)



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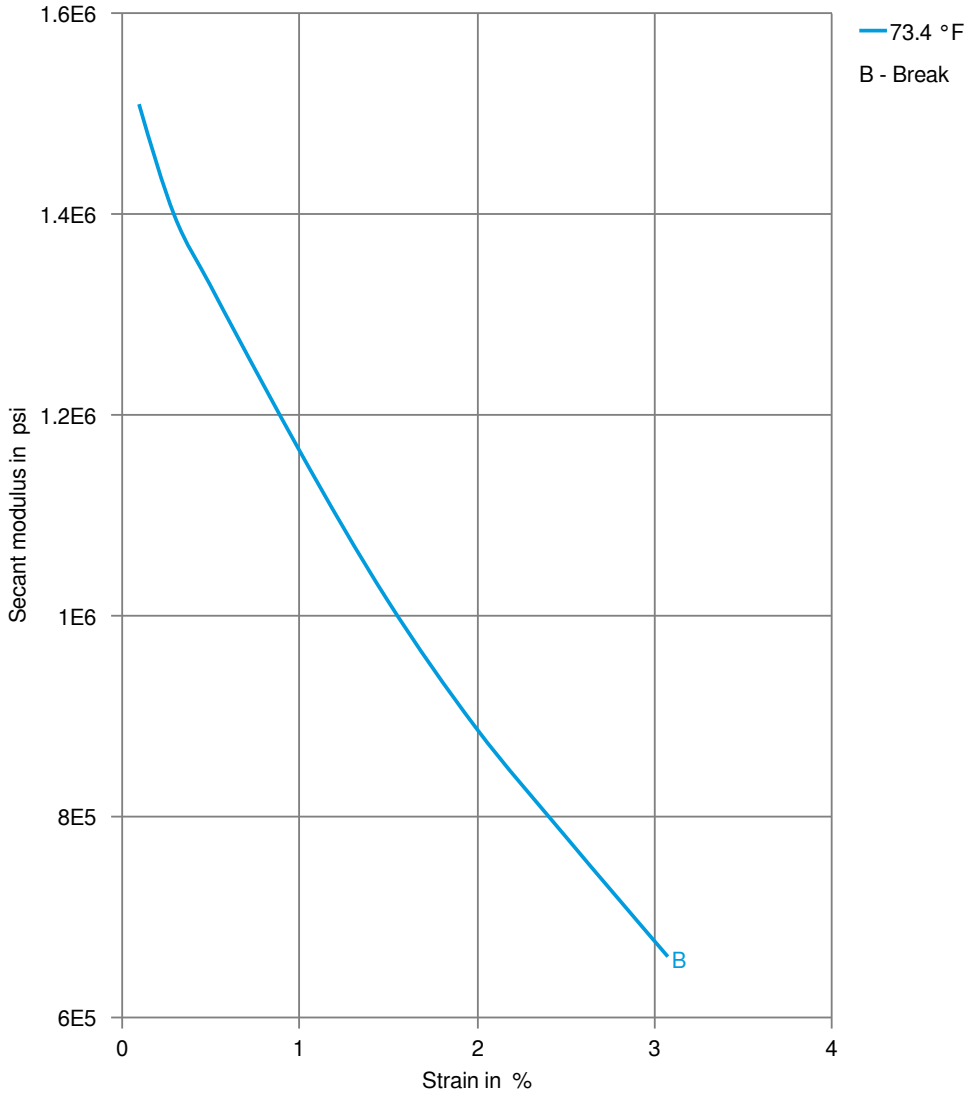
Stress-strain (cond.)



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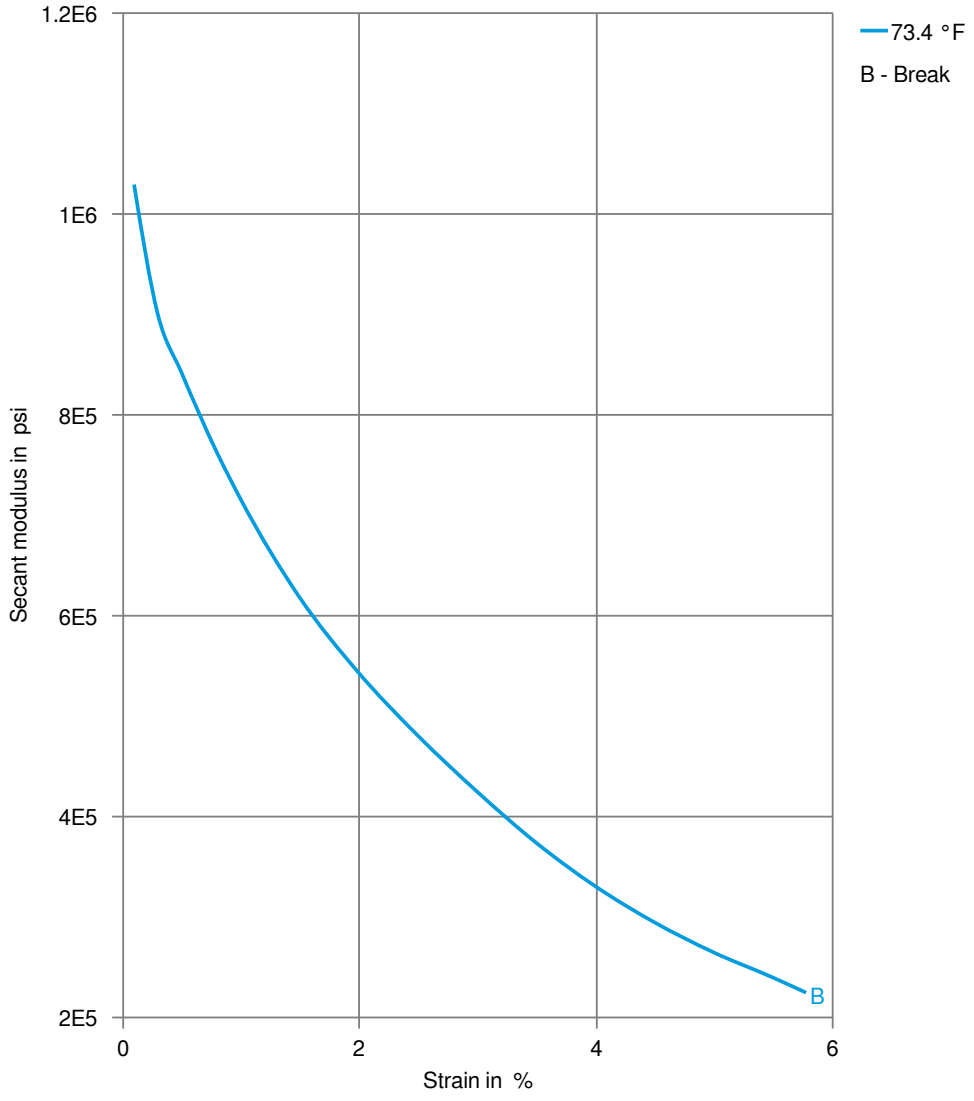
Secant modulus-strain (dry)



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Secant modulus-strain (cond.)



Revised: 2026-03-23 Source: Celanese Materials Database

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