

# FRIANYL® A3 GF30 V0 BK 9005

## 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.*

### Product information

Resin Identification	(PA66+PA6)-GF30 FR(40)	ISO 1043
Part Marking Code	>(PA66+PA6)-GF30 FR(40)<	ISO 11469
Continuous Service Temperature	130 °C	IEC 60216-1

### Rheological properties

	dry/cond.		
Viscosity number	140 / *	cm <sup>3</sup> /g	ISO 307, 1628
Moulding shrinkage range, parallel	0.3 - 0.6	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.6 - 0.9	%	ISO 294-4, 2577

### Typical mechanical properties

	dry/cond.		
Tensile modulus	10800 / 6500	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	140 / 100	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5 / 5	%	ISO 527-1/-2
Charpy impact strength, 23 °C	50 / >60	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23 °C	9.5 / 15	kJ/m <sup>2</sup>	ISO 179/1eA
Ball indentation hardness, H 961/30	220 / -	MPa	ISO 2039-1
Poisson's ratio	0.34 / 0.35 <sup>[C]</sup>		

[C]: Calculated

### Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	260 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	210 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	220 / *	°C	ISO 75-1/-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	0.4 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94
Glow Wire Flammability Index, 0.75mm	960 / -	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3.0mm	960 / -	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	775 / -	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3.0mm	800 / -	°C	IEC 60695-2-13
FMVSS Class	SE		ISO 3795 (FMVSS 302)

### Electrical properties

	dry/cond.		
Volume resistivity	1E12 / -	Ohm.m	IEC 62631-3-1
Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
Electric strength	40 / -	kV/mm	IEC 60243-1
Comparative tracking index	600 / -		IEC 60112

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### Physical/Other properties

	dry/cond.		
Humidity absorption, 2mm	1.3 / *	%	Sim. to ISO 62
Water absorption, 2mm	4.5 / *	%	Sim. to ISO 62
Density	1420 / -	kg/m <sup>3</sup>	ISO 1183

### Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.1 %
Melt Temperature Optimum	285 °C
Min. melt temperature	270 °C
Max. melt temperature	300 °C
Screw tangential speed	≤0.2 m/s
Mold Temperature Optimum	80 °C
Min. mould temperature	60 °C
Max. mould temperature	100 °C

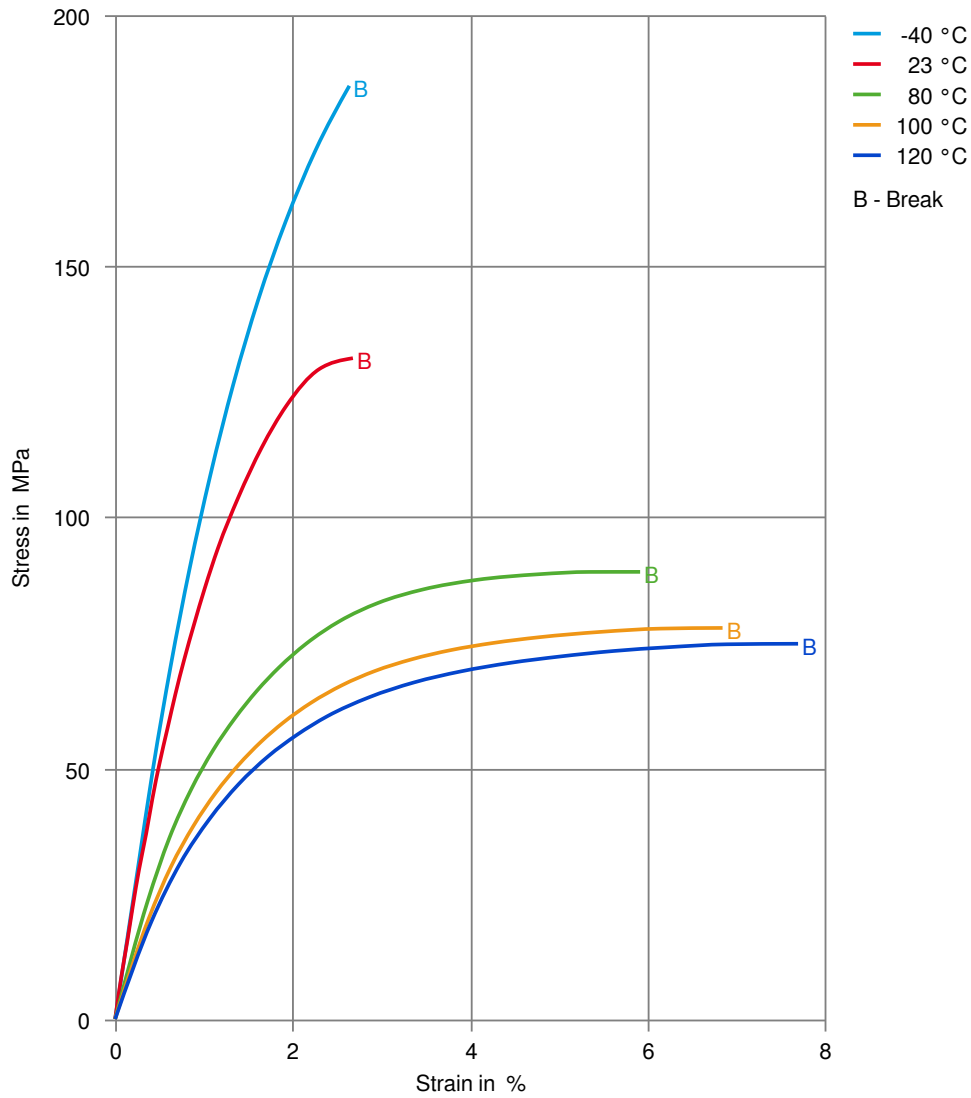
### Characteristics

Processing	Injection Moulding
Delivery form	Granules
Additives	Flame retardant, Non-halogenated/Red phosphorous free flame retardant
Special characteristics	Flame retardant, Heat stabilised or stable to heat

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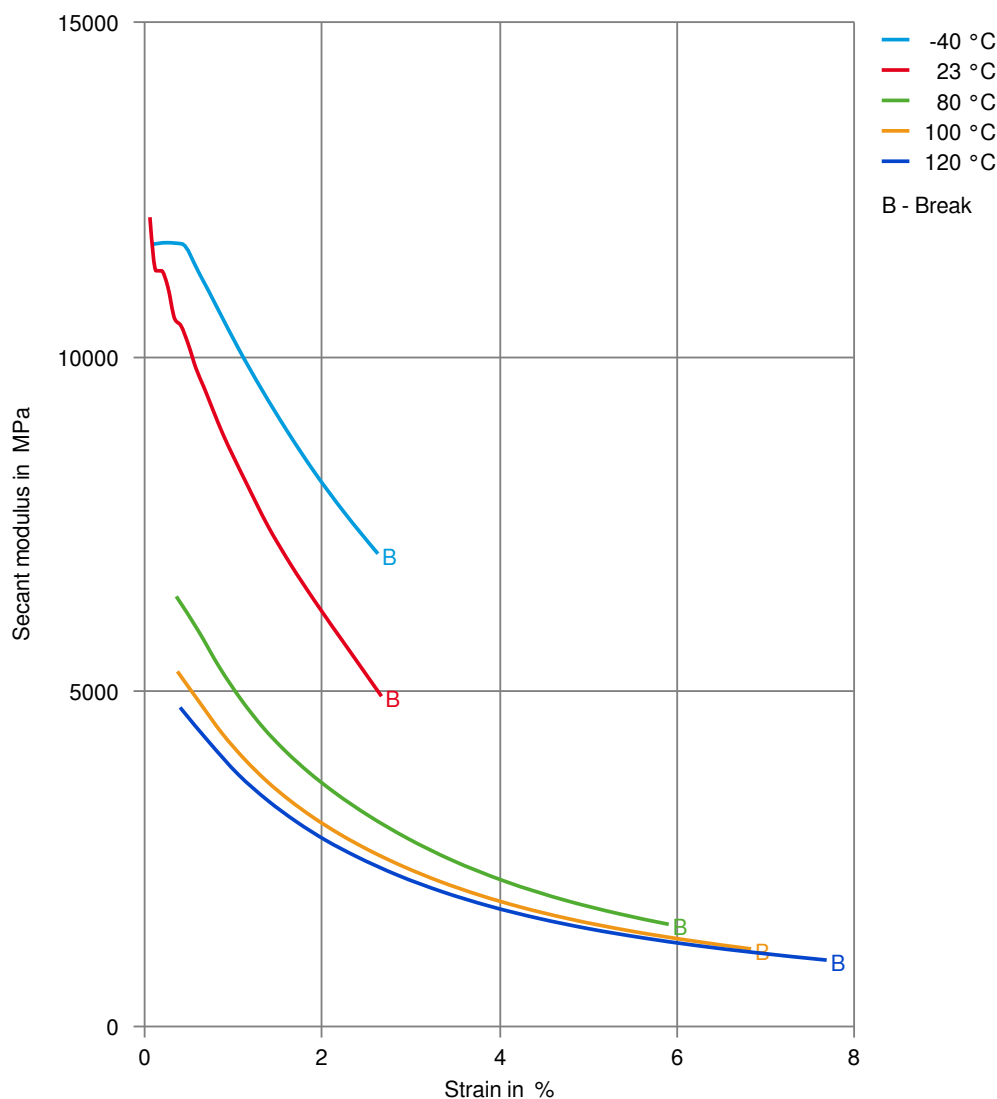
## Stress-strain (dry)



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### Secant modulus-strain (dry)



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