

FRIANYL® A3 GF25 V0 NC 1102

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)-GF25 FR(40)	ISO 1043
Part Marking Code	>(PA66+PA6)-GF25 FR(40)<	ISO 11469
Continuous Service Temperature	130 °C	IEC 60216-1

Rheological properties

	dry/cond.		
Melt volume-flow rate	65/*	cm ³ /10min	ISO 1133
Temperature	275/*	°C	
Load	5/*	kg	
Viscosity number	130/*	cm ³ /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	9000/5840	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	135/90	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	3/5.8	%	ISO 527-1/-2
Flexural modulus	9000/5840	MPa	ISO 178
Flexural strength	210/150	MPa	ISO 178
Flexural strain at failure	3.2/5	%	ISO 178
Charpy impact strength, 23°C	60/>60	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	10/15	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	7.5/-	kJ/m ²	ISO 179/1eA
Ball indentation hardness, H 961/30	215/-	MPa	ISO 2039-1
Poisson's ratio	0.34/0.35 ^[C]		

[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
Ball pressure test	175/-	°C	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	0.4/*	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)

FRIANYL® A3 GF25 V0 NC 1102

FRIANYL®

Electrical properties

	dry/cond.		
Volume resistivity	1E15/-	Ohm.m	IEC 62631-3-1
Surface resistivity	*/1E13	Ohm	IEC 62631-3-2
Electric strength	45/-	kV/mm	IEC 60243-1
Comparative tracking index, 100 drops	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	1360/-	kg/m ³	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

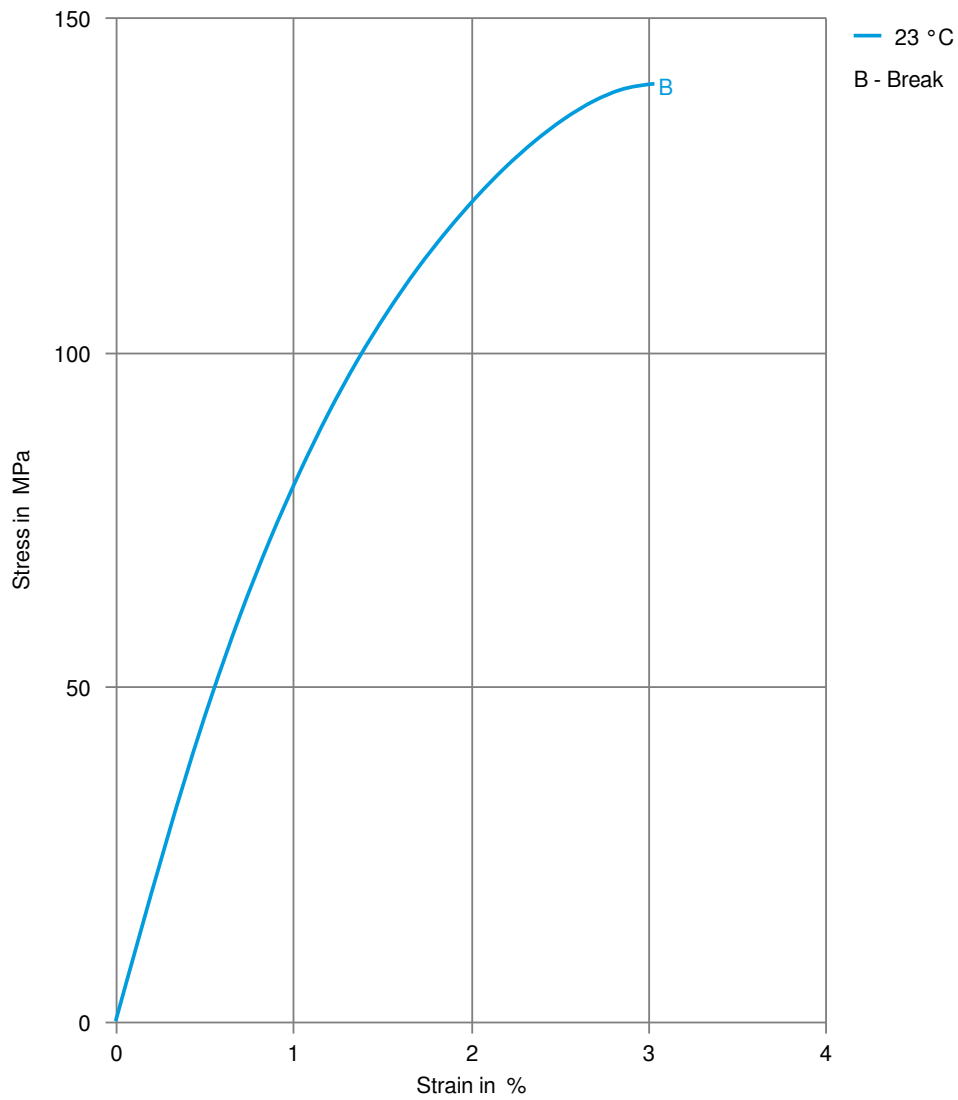
Automotive

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

FRIANYL® A3 GF25 V0 NC 1102

FRIANYL®

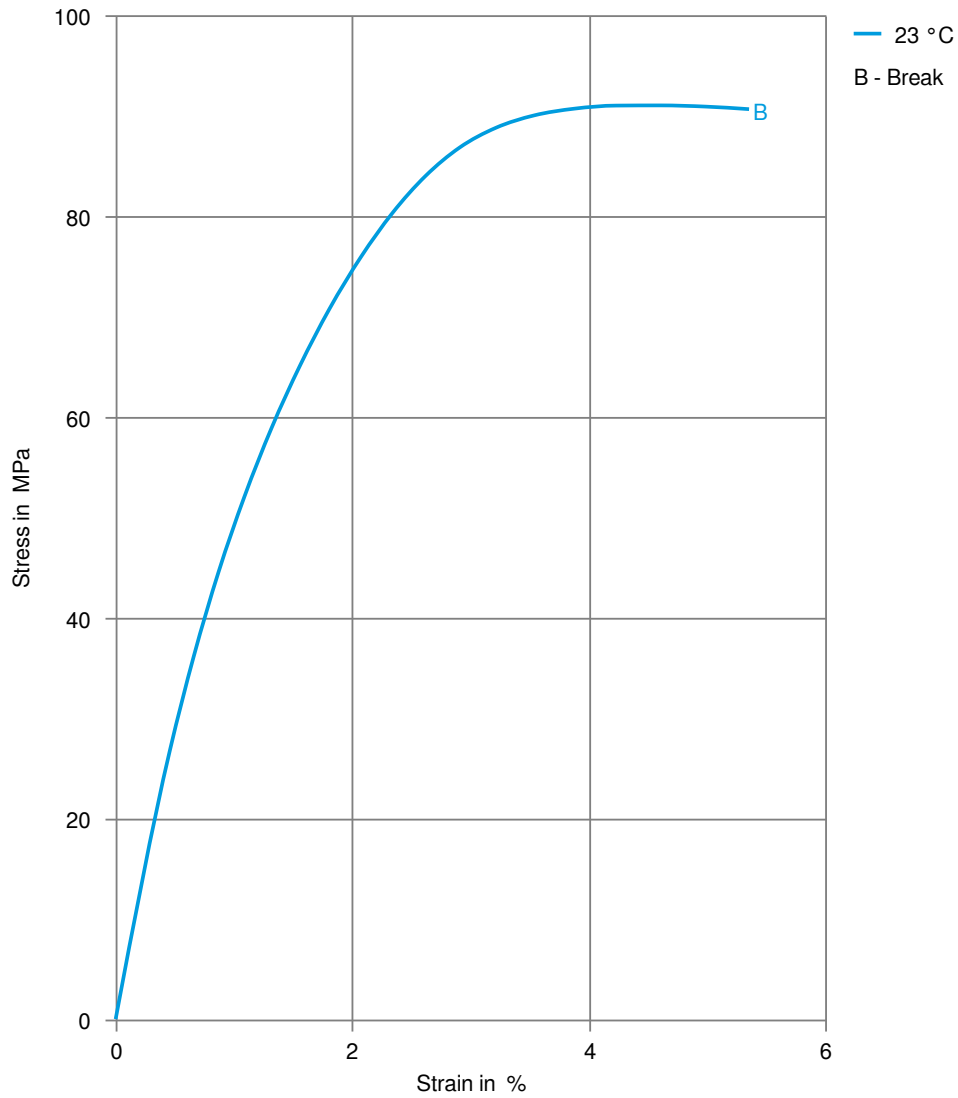
Stress-strain (dry)



FRIANYL® A3 GF25 V0 NC 1102

FRIANYL®

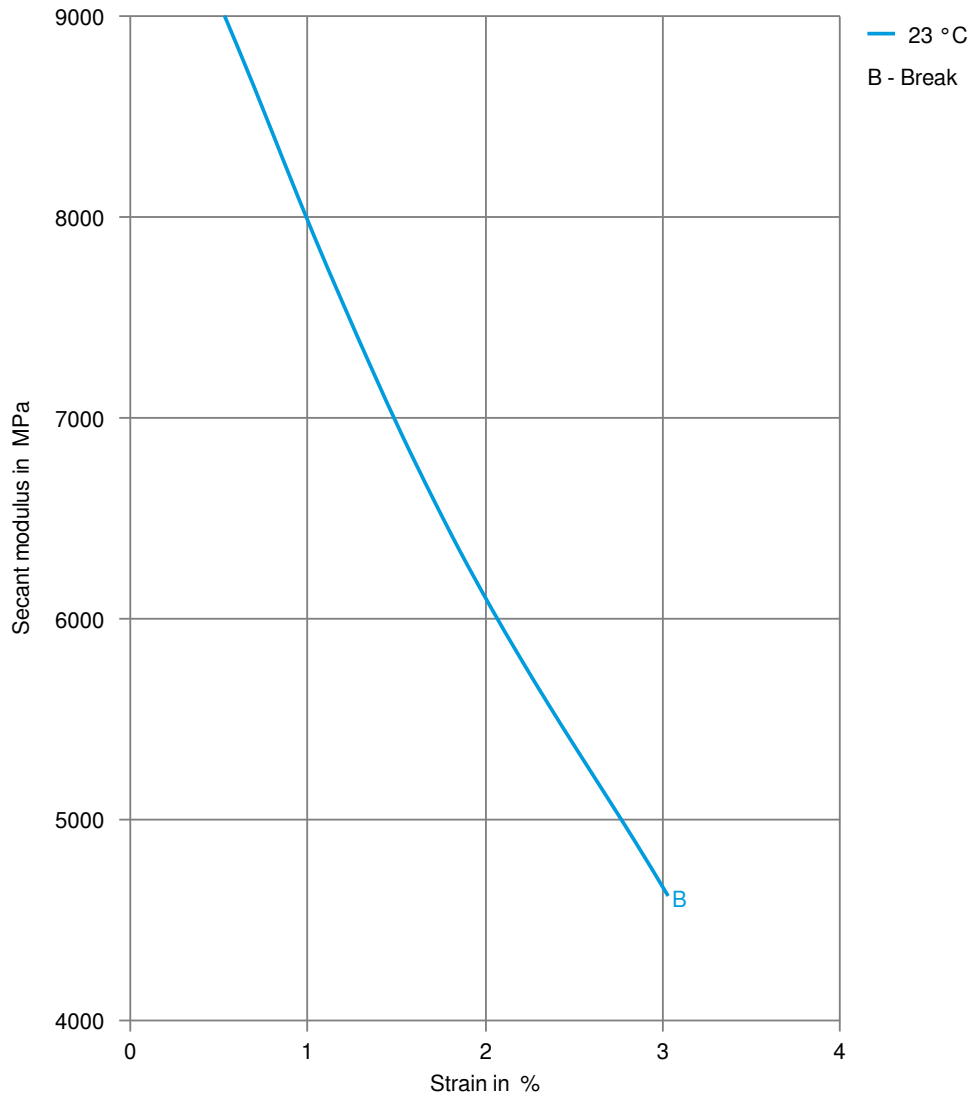
Stress-strain (cond.)



FRIANYL® A3 GF25 V0 NC 1102

FRIANYL®

Secant modulus-strain (dry)



FRIANYL® A3 GF25 V0 NC 1102

FRIANYL®

Secant modulus-strain (cond.)

