FRIANYL® XT4 GF30 V0I BK 9005/CC

PPA compound, 30% glass fiber reinforced, heat stabilized, halogens free. UL listed V0@0,4mm.
Specifically designed for electrical and electronic applications that require high thermal, peak and continuous resistance together with compliance with the most stringent safety requirements, this compound is also easy to process with excellent aesthetic results. Suitable for components that need to withstand the reflow soldering process (SMT).

Product information

Part Marking Code	>(PPA+PA6I/6T)-GF30 FR(40)<	ISO 11469

Rheological properties

Moulding shrinkage range, parallel	0.1 - 0.5	%	ISO 294-4, 2577
Moulding shrinkage range, normal	0.5 - 0.9	%	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	11400	MPa	ISO 527-1/-2
Stress at break, 5mm/min	140	MPa	ISO 527-1/-2
Strain at break, 5mm/min	2	%	ISO 527-1/-2
Charpy impact strength, 23°C	46	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	43	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	6.8	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	6.6	kJ/m²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	325	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	280	°C	ISO 75-1/-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0	class	UL 94
Burning Behav. at thickness h	V-0	class	UL 94
Thickness tested	0.4	mm	UL 94
UL recognition	yes		UL 94
Glow Wire Flammability Index, 0.75mm	960	°C	IEC 60695-2-12
Glow Wire Flammability Index, 3mm	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 0.75mm	775	°C	IEC 60695-2-13
Glow Wire Ignition Temperature, 3mm	825	°C	IEC 60695-2-13
FMVSS Class	SE		ISO 3795 (FMVSS 302)

Electrical properties

Comparative tracking index	Group I		IEC 60112
Comparative tracking index	PLC 0	PLC	UL 746A

FRIANYL® XT4 GF30 V0I BK 9005/CC

Other properties

Humidity absorption, 2mm	0.9	%	Sim. to ISO 62
Water absorption, 2mm	3	%	Sim. to ISO 62
Density	1420	kg/m³	ISO 1183

Injection

Melt Temperature Optimum	335	°C	Internal

Characteristics

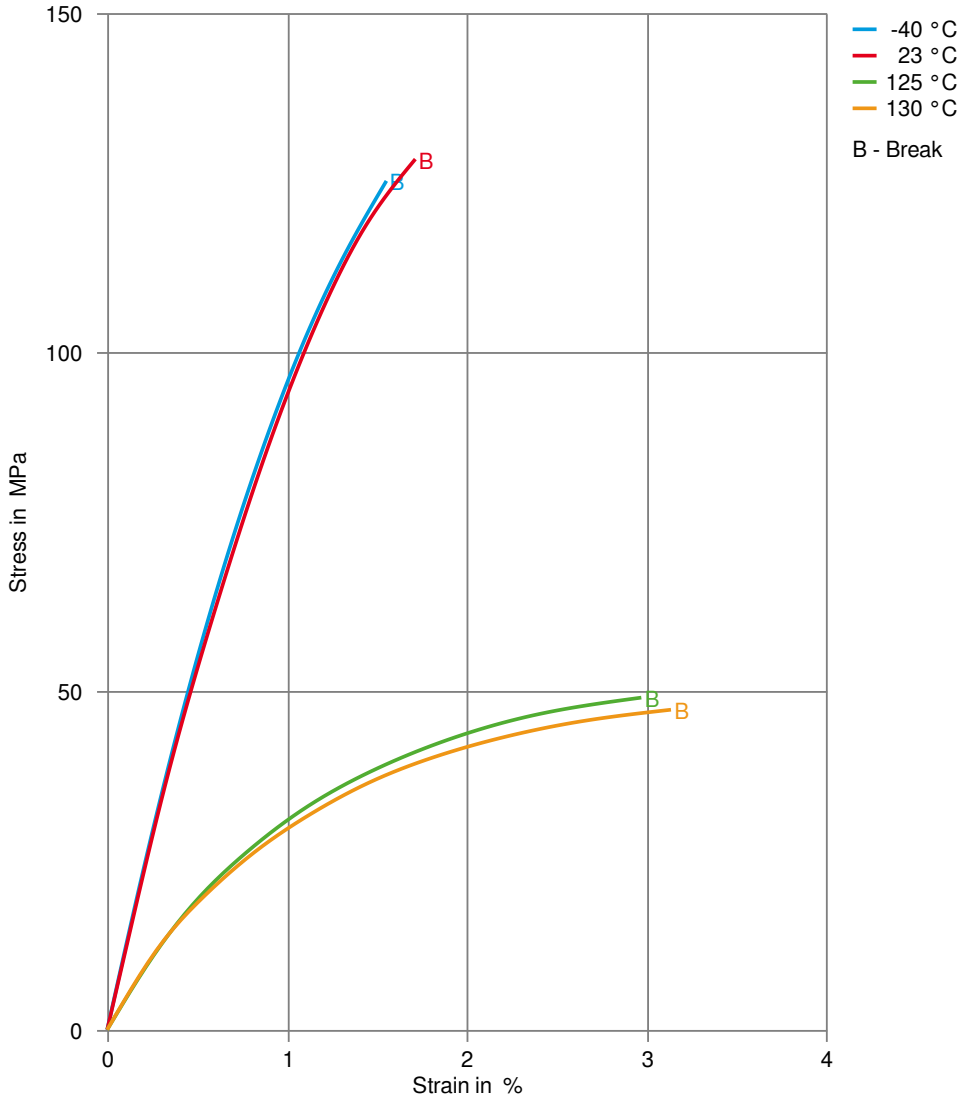
Additives	Flame retardant, Non-halogenated/Red phosphorous free flame retardant

Additional information

Injection molding	The following conditions apply to the normal injection molding process of FRIANYL XT4. Machine temperatures: barrel 310-325°C, nozzle and hot runners 325-340°C. Mold temperatures: 100°C. Back pressure: typically, <5 bar (hydraulic pressure). Temperatures exceeding 340°C and long residence time could lead to degradation and brittleness of the material. In case of gas generation in the melt, please verify moisture content and processing temperatures. Usage of regrind is possible depending on the molded part characteristics. For further details, please contact our technical support team.

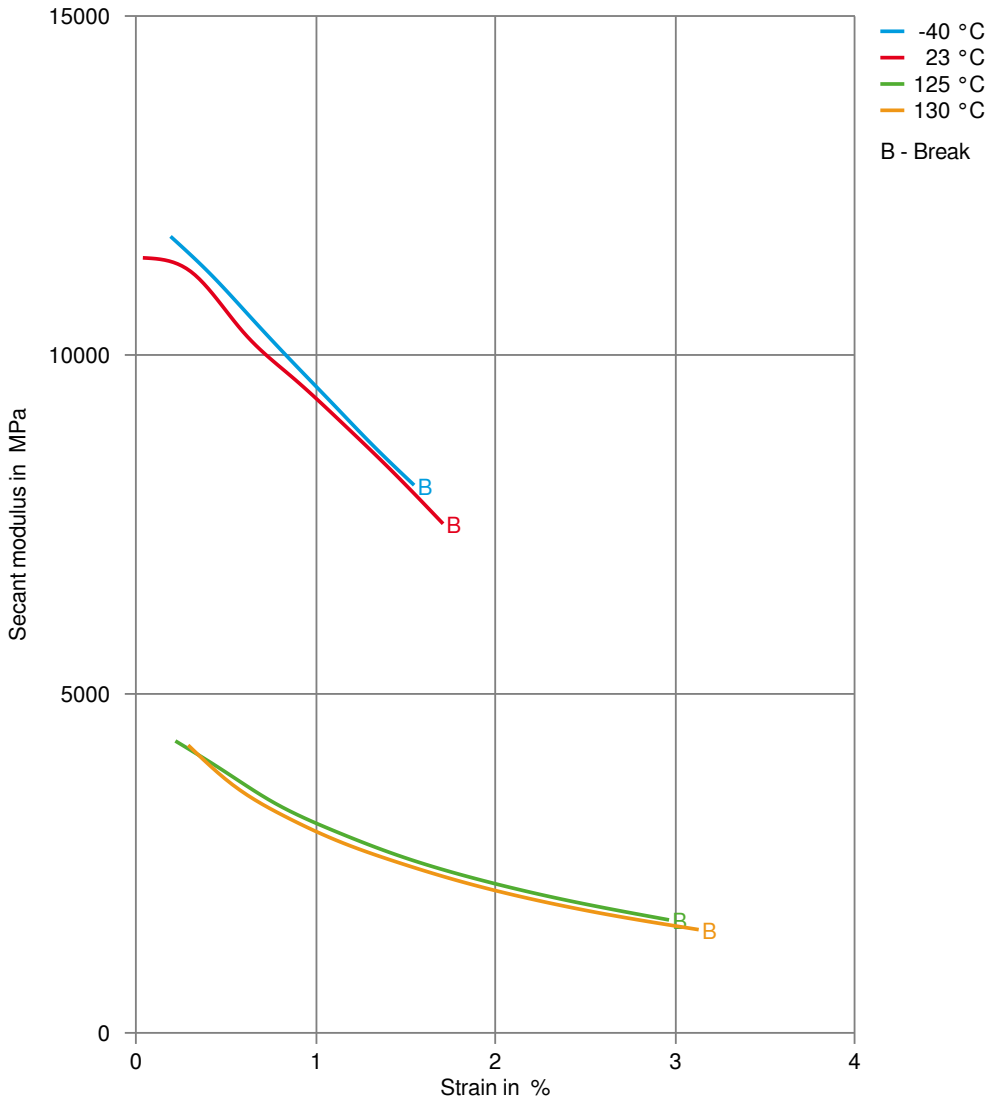
FRIANYL® XT4 GF30 V0I BK 9005/CC

Stress-strain



FRIANYL® XT4 GF30 V0I BK 9005/CC

Secant modulus-strain



FRIANYL® XT4 GF30 V0I BK 9005/CC

Processing Texts

Injection molding	The following conditions apply to the normal injection molding process of FRIANYL XT4. Machine temperatures: barrel 310-325°C, nozzle and hot runners 325-340°C. Mold temperatures: 100°C. Back pressure: typically, <5 bar (hydraulic pressure). Temperatures exceeding 340°C and long residence time could lead to degradation and brittleness of the material. In case of gas generation in the melt, please verify moisture content and processing temperatures. Usage of regrind is possible depending on the molded part characteristics. For further details, please contact our technical support team.
Injection molding Preprocessing	FRIANYL XT4 compound is supplied in moisture-proof packaging. The maximum moisture content allowed for the process of injection molding is 0.10%, but to get the maximum performance and reduce possible degradation phenomena is recommended molding with a moisture content <0.08%. The drying time depends on the initial moisture content and the drying conditions used. Typically 4-6h hours at 110°C with dry air (dew point of <-30°C) are sufficient for the material stored in unopened packs or with moisture content <0.20-0.25%.
Injection molding Postprocessing	Parts made by FRIANYL XT4 compound, do not change significantly their performance depending on the moisture uptake. Normally, a conditioning cycle is not necessary. After molding, with favorable environmental conditions, a piece can absorb moisture up to 0,1-0,3% in 24h and reach the equilibrium during its lifetime. The post-treatment of the parts may include annealing at 100-110°C in the oven, up to four hours. This treatment is useful to relax any internal stress.