FRIANYL® XT4 GF30 V0I BK 9005/D

PPA-GF30 Celanese

Product Texts

Specifically designed for electrical and electronic applications that require high thermal, peak and continuous resistance together with compliance with the most stringent safety requirements. Suitable for components that need to withstand the reflow soldering process (SMT).

Flammability @3.2mm nom. thickn.	V-0	-
Flammability @0.4mm nom. thickn.	V-0	-

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Molding shrinkage, parallel	**0.3**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.7**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**11500**	MPa	ISO 527
[C] Stress at break	**150**	MPa	ISO 527
[C] Strain at break	**2**	%	ISO 527
[C] Charpy impact strength, +23°C	**42**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**40**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**7.5**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**7**	kJ/m²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Temp. of deflection under load, 1.80 MPa	**295**	°C	ISO 75-1/-2

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	**3**	%	Sim. to ISO 62
[C] Humidity absorption	**0.9**	%	Sim. to ISO 62
[C] Density	**1420**	kg/m³	ISO 1183

[C]: CAMPUS

Characteristics

Processing
Injection Molding

Delivery form
Granules, Black

Special Characteristics
Flame retardant, Heat stabilized or stable to heat

Features
Creep Resistance, Low Warpage, Thermal Stability

Applications
Electrical and Electronical

Regional Availability
North America, Europe, Asia Pacific

Other text information

Injection molding

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%.

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.
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.
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