

FRIANYL® XT4 GF30 V0I NC 1102/F

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. Suitable for components that need to withstand the reflow soldering process (SMT).

Product information

Part Marking Code >PPA-GF30 FR(40)< ISO 11469

Typical mechanical properties

| | dry/cond. | | |
|--------------------------------------|-----------|----------------------|--------------|
| Tensile Modulus | 1.49E6 /- | psi | ISO 527-1/-2 |
| Stress at break, 5mm/min | 23200 /- | psi | ISO 527-1/-2 |
| Strain at break, 5mm/min | 2 /- | % | ISO 527-1/-2 |
| Charpy impact strength, 23°C | 23.8 /- | ftlb/in ² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 3.57 /- | ftlb/in ² | ISO 179/1eA |

Thermal properties

| | | |
|---|--------|----------------|
| Melting temperature, 10°C/min | 617 °F | ISO 11357-1/-3 |
| Temp. of deflection under load, 1.8 MPa | 536 °F | 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 in | UL 94 |
| UL recognition | yes | UL 94 |

Other properties

| | | |
|---------|-----------|----------|
| Density | 12 lb/gal | ISO 1183 |
|---------|-----------|----------|

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 NC 1102/F

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

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.
