Celanese
The chemistry inside innovation™

FRIANYL® DEV XT6 GF30 V0I BK 9005 - PPA *(EXPERIMENTAL)*

Description

PPA compound, 30% Glass Fiber Reinforced, Flame Retardant, Non-Halogenated, High Performance Polyamide

Physical properties	Value	Unit	Test Standard
Density	**89.9**	lb/ft³	ISO 1183
Water absorption, 23°C-sat	**3.5**	%	Sim. to ISO 62
Humidity absorption, 23°C/50%RH	**1.3**	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**1.52E6/1.54E6**	psi	ISO 527-1, -2
Tensile stress at break, 5mm/min	**21800/19400**	psi	ISO 527-1, -2
Tensile strain at break, 5mm/min	**2.2/2.3**	%	ISO 527-1, -2
Flexural modulus, 23°C	**1.6E6/1.56E6**	psi	ISO 178
Flexural strength, 23°C	**33400/31000**	psi	ISO 178
Charpy impact strength, 23°C	**21.4/-**	ft-lb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	**3.81/3.71**	ft-lb/in²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	**532**	°F	ISO 75-1, -2
Flammability @0.8mm nom. thickn.	**V-0**	class	UL 94
Flammability @0.4mm nom. thickn.	**V-0**	class	UL 94

Electrical properties	Value	Unit	Test Standard
Volume resistivity, 23°C	**>1E13/-**	Ohm*m	IEC 62631-3-1
Surface resistivity, 23°C	**>1E15/-**	Ohm	IEC 62631-3-2
Electric strength, 23°C (AC)	**838/-**	kV/in	IEC 60243-1
CTI 50 drops	**600**	V	IEC 60112

Typical injection molding processing conditions

Pre Drying	Value	Unit
Necessary low maximum residual moisture content	**0.1**	%
Drying time	**6 - 8**	h
Drying temperature	**212**	°F

Temperature	Value	Unit
Melt temperature	**608 - 617**	°F
Mold temperature	**194 - 266**	°F

Other text information

Injection Molding Preprocessing

FRIANYL XT6 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 6-8h hours at 100°C with dry air (dew point of <-30°C) are sufficient for the material stored in unopened packs or with moisture content < 0.10%.

Injection molding

The following conditions apply to the normal injection molding process of FRIANYL XT6. Processing (Melt) temperatures: 320-325°C. Mold temperatures: 90-130°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.

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Characteristics

Special Characteristics	Flame retardant
Product Categories	Glass reinforced
Processing	Injection molding
Delivery Form	Granules

General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use.To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication.Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards.We strongly recommend that users seek and adhere to the manufacturer’s current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.

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