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+188-1699-6168 (ShangHai)
+852-6957-5415 (HongKong)

TECHNYL®

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EXPERIMENTAL DATASHEET

TECHNYL XC 1952 GY2719

TECHNYL XC 1952 GY 2719 is a polyamide 6 based on a non-phosphorous and non-halogenated flame retardant system, reinforced with 25% of glass fillers, heat stabilized and suitable for injection moulding. This flame retardant grade showcases excellent moulding and electrical performance as this grade is being rated at 1 kV for IPT (Inclined plane tracking).
This grade offers a unique polyamide HFFR combination, being UL Yellow card listed with all RTI ratings available from 0.8 to 3.0 mm thickness & having 20% of recycled glass filler coming from Post-Industrial (PIR) & Post-Consumer (PCR) waste scraps. It consequently offers a unique sustainable polyamide solution for Electrical & Electronic applications needing UL certification. This recycled grade being furthermore EN 45545-2 certified for R22 & R23.

General

Feature	UL V2 Arc resistant Recycled	Lasermarkable halogen free flame retardant
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card European Railways Certifications EN 45545-2
Applications	Electrical/Electronic Applications Contactors	circuit breaker
Colors available	Grey	White
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-GF25 FR(30)
ISO 16396 designation	PA6,GF25FR(30),M1,S14-060

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.35
Water absorption	24 hr, 23°C	ISO 62	%	1.1
Water absorption, saturation			%	5.8
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.7 - 0.85
Molding shrinkage, normal		ISO 294-4, 2577	%	0.35 - 0.5

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	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	6200 / -
Stress at break		ISO 527-1/-2	MPa	80 / -
Strain at break		ISO 527-1/-2	%	3 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	42 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	3 / -
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	220
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	210
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	170
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	205
Electrical properties				
Comparative tracking index	Solution A	IEC 60112	V	500
CTI performance level category		Sol A		PLC 1
Burning behaviour				
UL Yellow Card availability (UL)	Click here to have access to the UL Yellow Card → QMFZ2 E44716			
Flammability, 0.75 mm	0.75 mm	UL 94		V2
Flammability, 1.5 mm	1.5 mm	UL 94		V2
Flammability, 3.0 mm	3.0 mm	UL 94		V2
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	960
Glow-wire flammability index, GWFI, 3.0 mm	3.0 mm	IEC 60695-2-12	°C	960
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

**: conditioned according to ISO 1110*

Processing conditions	
Drying temperature/time	80°C
Suggested max moisture	0.15 %
Rear temperature	230 - 235 °C
Middle temperature	235 - 240 °C
Front temperature	235 - 245 °C
Recommended mould temperature	60 - 90 °C

Processing conditions

Injection notes

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point minimum -20°C. Recommended time 2-4h.

Injection advice

All reinforced, flame retardant compounds generate some level of abrasion/corrosion to the steel processing equipment. These issues may be magnified by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process. Therefore, Domo recommends you adhere to the processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retardant compounds, Domo advises you to use a steel with high chromium and high carbon content (having a minimum concentration of 16% chromium) to prevent corrosion and abrasion. For the correct reference of steel associated to flame retardant compounds' processing, please refer to your equipment manufacturers. In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.

Disclaimer

The information provided in this documentation corresponds to our technical knowledge at the date of its publication and do not constitute a specification. This information may be subject to revision at our discretion. Domo cannot anticipate all conditions under which this information and our products of other manufactures in combination with our products may be used. Domo accepts no responsibility for results obtained by the application of this information or for the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product or product combination for their own purposes. Unless otherwise agreed in writing, Domo sells the product without warranties. Buyers and users assume all responsibility and liability for loss or damage arising from handling and use of our products, whether used alone or in combination with other products. Unless specifically indicated, the grades mentioned are not suitable for applications in the pharmaceutical/medical sector.