

EXPERIMENTAL DATASHEET

TECHNYL STAR AF 60SX V30 ORANGE 2703
(Previously TECHNYL XA 1573 ORANGE 2703)

TECHNYL STAR AF 60SX V30 ORANGE 2703 is a high flow polyamide 66 based on a non halogenated flame retardant system, reinforced of 30% of glass fiber, for injection moulding. This product has been specifically designed to resolve the problematic of exudation and/or blooming depending on the usage of the parts. In addition, this product is a non-halogenated flame retardant grade with a complete yellow card included full RTI down to 0.8mm, 5VA @ 1.5mm and f1 rating. This product is as well easy to mould. This product offers his best benefit for all Electrical protection devices and not limited too, such as well connectic and photovoltaic application.

General

Feature	UL V0 Very high flow Low blooming	Halogen and red phosphorus free flame retardant Excellent surface finish
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	UL-Yellow Card	EC 1907/2006 (REACH)
Applications	Connectors	Electrical/Electronic Applications
Colors available	Orange	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF30 FR(40)
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	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.46
Water absorption	24 hr, 23°C	ISO 62	%	0.7
Water absorption, saturation			%	4.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.2 - 0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.1

Mechanical properties

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Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	11000 / 8000
Stress at break		ISO 527-1/-2	MPa	145 / 100
Strain at break		ISO 527-1/-2	%	2.4 / 2.9
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	65 / 55

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	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	263
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	262
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	250

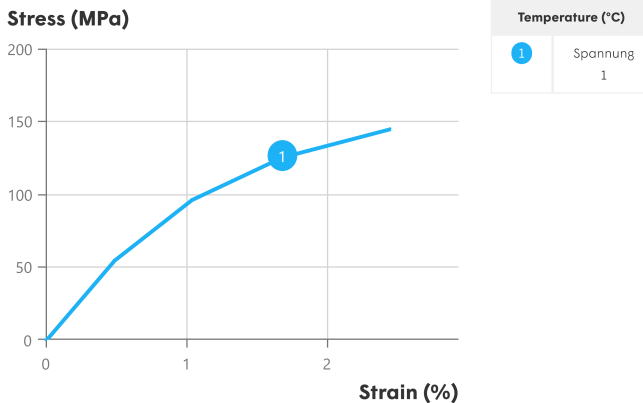
Electrical properties				
Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0
Dielectric strength	1 mm	IEC 60243-1	kV/mm	33

Burning behaviour				
UL Yellow Card availability 	Click here to have access to the UL Yellow Card → QMFZ2.E44716			
Glow-wire flammability index, GWFI, 0.75 mm	0.75 mm	IEC 60695-2-12	°C	960
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
Glow-wire ignition temperature, GWIT, 0.75 mm	0.75 mm	IEC 60695-2-13	°C	750
Oxygen index			%	33
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

*: conditioned according to ISO 1110

Processing conditions	
Drying temperature/time	80°C
Suggested max moisture	0.12 %
Rear temperature	260 - 270 °C
Middle temperature	265 - 275 °C
Front temperature	265 - 280 °C
Recommended mould temperature	60 - 90 °C

Stress-strain, dry



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.