

TECHNICAL DATA SHEET

**TECHNYL STAR AF 60SX V30 ORANGE 2688**  
(Previously TECHNYL ORANGE XA 1573 ORANGE 2688)

TECHNYL STAR XA 1573 ORANGE 2688 is a polyamide 66 based on a non halogenated flame retardant system, reinforced with 30% of glass fiber, high flow, for injection moulding. This grade offers in addition to a high flow matrix and a good combination of fire properties the particularity to decrease the level of blooming/exudation phenomena during the lifetime of the application.

**General**

Feature	Very high flow Glow wire resistant	Electrical corrosion resistant Good surface finish
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Connectors	Electrical/Electronic Applications
Colors available	Black	Orange
Forms	Pellets	

**Product identification**

ISO 1043 abbreviation	PA66-GF30 FR(40)
ISO 16396 designation	PA66,GF30FR(40)0,M1,S14-110

Condition	Standard	Unit	Value
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**Physical properties**

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm <sup>3</sup>	1.46	
Water absorption	24 hr, 23°C	ISO 62	%	0.7
Water absorption, saturation			%	4.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	1

**Mechanical properties**

Condition	Standard	Unit	Value	
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	11000 / -
Stress at break		ISO 527-1/-2	MPa	130 / -
Strain at break		ISO 527-1/-2	%	2.7 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	50 / -

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	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	263
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	260
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	244

<b>Electrical properties</b>				
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	37

<b>Burning behaviour</b>				
Flammability, 0.75 mm	0.75 mm	UL 94		V0
Flammability, 1.5 mm	1.5 mm	UL 94		V0
Flammability, 3.0 mm	3.0 mm	UL 94		V0
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

*Test run at 23°C if not differently specified, DAM state (dry as moulded).  
\*: conditioned according to ISO 1110*

<b>Processing conditions</b>	
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

**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.