TECHNYL STAR®
High-flow PA6 & PA66

DOMO
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TECHNICAL DATA SHEET

TECHNYL STAR AF 60SX V30 GY 7035 LPU

TECHNYL STAR AF 60SX V30 GREY 7035 LPU is a polyamide 66 based on a non halogenated flame retardant system, reinforced with 30% of glass fiber, 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 life time of the application.

General

Polymer type	PA66	
Certifications	UL listed product	EC 1907/2006 (REACH)
Feature	halogen and red phosphorus free flame retardant excellent surface finish low halogen content	UL 94 V0 low blooming very high flow
Applications	connectors	electrical/electronic applications
Colors available	grey	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66-GF30 FR(40)

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	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	%	1.0

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10800 / 8000
Stress at break		ISO 527-1/-2	MPa	105 / 75
Strain at break		ISO 527-1/-2	%	1.5 / 2.5
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	33 / 33

: conditioned according to ISO 1110

	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	243

	Condition	Standard	Unit	Value
Burning behaviour				
UL Yellow Card availability 1	**Click here to have access to the UL Yellow Card availability 1 -> QMFZ2.E44716**			
Flammability, 0.75 mm	0.75 mm	UL 94		V0
Flammability, 1.5 mm	1.5 mm	UL 94		5VA
Flammability, 3.0 mm	3.0 mm	UL 94		5VA
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			°C	960
Glow-wire ignition temperature, GWIT, 0.75 mm	0.75 mm	IEC 60695-2-13	°C	750
Oxygen index			%	33.0
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

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	Condition	Standard	Unit	Value

Electrical properties

Comparative tracking index	Solution A	IEC 60112	V	600.0
CTI performance level category		Sol A		PLC 0
Dielectric strength	1 mm	IEC 60243-1	kV/mm	37.0

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

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.