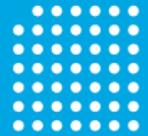


TECHNICAL DATA SHEET

TECHNYL STAR S 60X1 V30 RD 2752

TECHNYL XS 2322 RD 2752



TECHNYL STAR S 60X1 V30 RD 2752 is a grade based on a non-halogenated flame retardant system and on a patented high flow polyamide 6 resin (TechnylStar), reinforced of 30% of glass fiber, heat stabilized, for injection moulding. This grade is heat stabilized and provides optimized injection moulding performance.

General

Certifications	RoHS EC 1907/2006 (REACH)	UL listed product
Polymer type	PA6	
Feature	flame retarded UL 94 V0 excellent surface finish GWFI 960°C	halogen and red phosphorus free flame retardant corrosion resistant very high flow GWIT 775°C
Applications	connectors	electrical/electronic applications
Colors available	black orange red	natural grey
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6-GF30 FR(40)
ISO 16396 designation	PA6,GF30FR(40),M,S14-110

Condition	Standard	Unit	Value
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Physical properties

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm ³	1.42	
Humidity absorption	T=23°C, 50% RH	ISO 62	%	0.9
Water absorption	24 hr, 23°C	ISO 62	%	0.8 - 0.9
Water absorption, saturation			%	4.2
Molding shrinkage, parallel	ISO 294-4, 2577	%		0.2 - 0.4
Molding shrinkage, normal	ISO 294-4, 2577	%		0.6 - 0.8

Condition	Standard	Unit	Value
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Mechanical properties

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Condition	Standard	Unit	Value	
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	11000 / 7200
Stress at break		ISO 527-1/-2	MPa	140 / 90
Strain at break		ISO 527-1/-2	%	2.4 / 5.1
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	60 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	9.5 / -

*: **conditioned according to ISO 1110**

Condition	Standard	Unit	Value
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Thermal properties

Condition	Standard	Unit	Value
Melting temperature, 10°C/min	ISO 11357-1	°C	222
Temp. of deflection under load, 1.80 MPa	ISO 75	°C	202

Condition	Standard	Unit	Value
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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		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
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	775
Glow-wire ignition temperature, GWIT, 1.5 mm	1.5 mm	IEC 60695-2-13	°C	800
Glow-wire ignition temperature, GWIT, 3.0 mm	3.0 mm	IEC 60695-2-13	°C	825
Oxygen index			%	35.0
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Condition	Standard	Unit	Value
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Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	6.0E12
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	38.0

Processing conditions

Drying temperature/time	80°C
Suggested max moisture	0.2 %

Processing conditions

Rear temperature	230 - 235 °C
Middle temperature	235 - 240 °C
Front temperature	240 - 245 °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.