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TECHNYL STAR®
High-flow PA6 & PA 6.6

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL STAR SX 218 V60 BK Z

TECHNYL STAR SX 218 V60 BK Z is based on a patented high flow polyamide 6 resin (Technylstar), heat stabilized, reinforced with 60% of glass fibre, for injection moulding. Due to its outstanding flow caracteristics, this grade allows more freedom in mould and part design versus a standard polyamide solutions.

General

Feature	Heat-aging stabilized Very high flow High stiffness	High dimensional stability Excellent surface finish
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Applications	Automotive Applications Outdoor Applications Sport	Handles Pulleys
Colors available	Black	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-GF60

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.65
Water absorption	24 hr, 23°C	ISO 62	%	0.55
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	0.4

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	21000 / 13500
Stress at break		ISO 527-1/-2	MPa	240 / 165
Strain at break		ISO 527-1/-2	%	2.3 / 3.4
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	19500 / 14000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	380 / 280
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	85 / 95
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	15 / 20
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	90 / 100
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	15 / 22
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	222
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	215
Burning behaviour				
UL Yellow Card availability	Click here to have access to the UL Yellow Card → QMFZ2.E44716			
Flammability, 1.5 mm	1.5 mm	UL 94		HB

**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	230 - 235 °C
Middle temperature	235 - 245 °C
Front temperature	245 - 250 °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

For reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). 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.