TECHNYL STAR®
High-flow PA6 & PA66

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL STAR SX 219L1 V50 BK

TECHNYL STAR XS 2217 BK

TECHNYL STAR SX 219L1 V50 BK is based on a patented high flow polyamide 6 resin (Technylstar), organic heat & UV stabilized, reinforced with 50% of glass fibre, for injection moulding. It is designed for electro-friendly applications.

General

Certifications	RoHS	EC 1907/2006 (REACH)
Polymer type	PA6	
Feature	UV stabilized high flow organic heat stabilized	electro-friendly high stiffness
Applications	automotive applications	
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6-GF50
ISO 16396 designation	PA6-GF50,ML1,S14-190

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.58
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.4
Water absorption	24 hr, 23°C	ISO 62	%	0.5 - 0.6
Water absorption, saturation			%	2.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.15 - 0.25
Molding shrinkage, normal		ISO 294-4, 2577	%	0.8 - 0.9

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	18000 / -
Stress at break		ISO 527-1/-2	MPa	245 / -
Strain at break		ISO 527-1/-2	%	2.5 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	15900 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	350 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	90 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	16.5 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	16 / -

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	220
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	210

	Condition	Standard	Unit	Value
Burning behaviour				
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

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.