

TECHNICAL DATA SHEET

TECHNYL STAR SX 216 V50 NC

TECHNYL STAR SX 216 V50 NC is based on a patented high flow polyamide 6 resin (Technylstar), reinforced with 50% of glass fibre, for injection moulding. Due to its outstanding flow characteristics, this grade allows more freedom in mould and part design versus a standard polyamide solutions.

General

Feature	High dimensional stability Excellent surface finish	Very high flow High stiffness
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Consumer good application Industrial Applications	Electrical/Electronic Applications Sport
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-GF50
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Condition	Standard	Unit	Value
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Physical properties

Density		ISO 1183	g/cm³	1.55
Water absorption	24 hr, 23°C	ISO 62	%	0.72
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.15
Molding shrinkage, normal		ISO 294-4, 2577	%	0.6

Mechanical properties

dam / cond.*

Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	17000 / 11600
Stress at break		ISO 527-1/-2	MPa	230 / 162
Strain at break		ISO 527-1/-2	%	2.6 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	15500 / 10000
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

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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	210

Electrical properties

Comparative tracking index	Solution A	IEC 60112	V	500
CTI performance level category		Sol A		PLC 1

Burning behaviour

Flammability, 1.5 mm	1.5 mm	UL 94		HB
Flammability, 3.0 mm	3.0 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

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