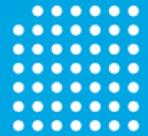


TECHNICAL DATA SHEET

**TECHNYL STAR SX 216 V60 NC**



TECHNYL STAR SX 216 V60 NC is based on a patented high flow polyamide 6 resin (Technylstar), reinforced with 60% 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**

Certifications	RoHS	EC 1907/2006 (REACH)
Polymer type	PA6	
Feature	excellent surface finish high stiffness	high dimensional stability very high flow
Applications	connectors gears sport	consumer applications industrial applications
Colors available	natural	
Forms	pellets	
Processing technology	injection moulding	

**Product identification**

ISO 1043 abbreviation	PA6-GF60
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Condition	Standard	Unit	Value
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**Physical properties**

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm <sup>3</sup>	1.65
Water absorption	24 hr, 23°C	ISO 62	%	0.5 - 0.6
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	0.35

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	21000 / 15500
Stress at break		ISO 527-1/-2	MPa	240 / 165
Strain at break		ISO 527-1/-2	%	2.5 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	19000 / 13200
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	380 / 280
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	85 / 95
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	15 / 20
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m <sup>2</sup>	90 / 100
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	15 / 22

\*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	222
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	216
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	210

	Condition	Standard	Unit	Value
<b>Burning behaviour</b>				
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

**Processing conditions**

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

### Processing conditions

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.