

EXPERIMENTAL DATASHEET

TECHNYL STAR S 216L1 V30 BK 3N

TECHNYL STAR S 216L1 V30 GY BK 3N is based on a patented high flow polyamide 6 resin (TechnylStar), reinforced with 30% of glass fibre, UV stabilized, for injection moulding. Due to its outstanding flow characteristics, this grade provides a significant productivity improvement and allows more freedom in mould and part design versus a standard polyamide solutions.

General

Feature	UV-stabilized	high flow
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications Outdoor Applications	Handles
Colors available	Black	Grey
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-GF30
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Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.34
Water absorption	24 hr, 23°C	ISO 62	%	0.9 - 1.1

Mechanical properties

dam / cond.*

	Condition	Standard	Unit	Value
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 6200
Stress at break		ISO 527-1/-2	MPa	165 / 95
Strain at break		ISO 527-1/-2	%	2.4 / 4.9
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	8900 / 5300
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	250 / 160
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	50 / 60
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	9 / 11
Rockwell hardness		ISO 2039/2	ScaleR	120 / 115

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	Condition	Standard	Unit	Value
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	205

Burning behaviour

Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100
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**: 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 - 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

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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