TECHNYL STAR®
High-flow PA6 & PA 6.6

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL STAR AF 218 V40 BK 21N

TECHNYL STAR AF 218 V40 BK 21N is a polyamide 6.6, high flow, reinforced with 40% of glass fiber, heat stabilized, for injection moulding. Due to its outstanding flow caracteristics, this grade shows exceptional processing behaviour and excellent surface aspect of the finished part. This grade is ideal for use in the automotive industry for engine components. This grade is ideal for Mucell® injection moulding technology.

General

Feature	Heat-aging stabilized Excellent surface finish	Very high flow
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications General Purpose	Pulleys
Colors available	Black	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF40
ISO 16396 designation	PA66,GF400,M1,S14-140

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.46
Water absorption	24 hr, 23°C	ISO 62	%	0.6 - 0.7
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	12000 / 7200
Stress at break		ISO 527-1/-2	MPa	220 / 140
Strain at break		ISO 527-1/-2	%	2.5 / 3.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	10800 / 7600
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	305 / 230
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	92 / 95
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	14 / 18
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	14 / 18

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	263
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	255
Burning behaviour				
Flammability, 0.75 mm	0.75 mm	UL 94		HB

**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	265 - 275 °C
Middle temperature	270 - 280 °C
Front temperature	280 - 290 °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