TECHNYL STAR®
High-flow PA6 & PA66

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL STAR AF 218 V30 BK 21N

TECHNYL STAR AF 218 V30 BK 21N is a polyamide 6.6, high flow, reinforced with 30% 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.his grade is ideal for use in the automotive industry for engine components. This grade is ideal for Mucell® injection moulding technology.

General

Certifications	RoHS	EC 1907/2006 (REACH)
Polymer type	PA66	
Feature	heat-aging stabilized very high flow	excellent surface finish
Applications	automotive applications pulleys	general purpose
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66-GF30
ISO 16396 designation	PA66,GF30,MH,S14-100

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.36
Water absorption	24 hr, 23°C	ISO 62	%	0.75 - 0.8
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.25 - 0.35
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9 - 1.0

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 6500
Stress at break		ISO 527-1/-2	MPa	190 / 110
Strain at break		ISO 527-1/-2	%	3 / 8
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	8600 / 5600
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	285 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	70 / 80
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	58 / 64
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	10 / 15
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	9 / 13

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	260
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	257
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	243

	Condition	Standard	Unit	Value
Burning behaviour				
Flammability, 1.5 mm	1.5 mm	UL 94		HB
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	265 - 275 °C
Middle temperature	270 - 280 °C

Processing conditions

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.