

TECHNICAL DATA SHEET

**TECHNYL STAR AF 218S V35 BK 21N**

TECHNYL STAR AF 218S V35 BK 21N is a polyamide 6.6 offering high flowability, reinforced with 35% of glass fiber, heat stabilized, for injection moulding. Due to its outstanding flow characteristics, this grade shows exceptional processing behaviour and superior surface aspect of the finished part. This grade offers an excellent combination between thermal and mechanical properties.

**General**

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

**Product identification**

ISO 1043 abbreviation	PA66-GF35
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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>	1.41
Water absorption	24 hr, 23°C	ISO 62	%	0.75
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	1

**Mechanical properties**

dam / cond.\*

	Condition	Standard	Unit	Value
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	11000 / 7200
Stress at break		ISO 527-1/-2	MPa	200 / 115
Strain at break		ISO 527-1/-2	%	2.6 / 4.4
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	9500 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	280 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	75 / 85
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	12 / 14

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	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	262
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	255

\*: 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	50 - 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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