

TECHNICAL DATA SHEET

## TECHNYL A 218 S40 BK 21N

TECHNYL A 218 S40 BK 21N is a Polyamide PA66, reinforced with 40% of glass spheres, Heat stabilised, for injection moulding. This grade offers an excellent combination between thermal and mechanical properties.

### General

Polymer type	PA66		
Certifications	RoHS	EC 1907/2006 (REACH)	
Feature	heat-aging stabilized low warpage	good surface finish	
Applications	automotive applications	pulleys	
Colors available	black		
Forms	pellets		
Processing technology	injection moulding		

### Product identification

ISO 1043 abbreviation	PA66-GB40
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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>	1.43
Water absorption	24 hr, 23°C	ISO 62	%	0.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.2
Molding shrinkage, normal		ISO 294-4, 2577	%	1.2

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	5200 / 3000
Stress at break		ISO 527-1/-2	MPa	65 / 40
Strain at break		ISO 527-1/-2	%	5.3 / 7.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	5000 / 2600
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	150 / 75
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	25 / 130
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	3 / 5

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

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	261
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	225
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	95

	Condition	Standard	Unit	Value
<b>Burning behaviour</b>				
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100 mm/min

<b>Processing conditions</b>	
Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	270 - 280 °C
Middle temperature	280 - 290 °C
Front temperature	280 - 300 °C
Recommended mould temperature	70 - 100 °C

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## 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.