

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

Feature	Heat-aging stabilized	Low warpage
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications	Pulleys
Colors available	Black	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GB40
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	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	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

Mechanical properties

				dam / cond.*
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 ²	25 / 130
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	Condition	Standard	Unit	Value
Thermal properties				
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

*: conditioned according to ISO 1110

Processing conditions

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

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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