

TECHNICAL DATA SHEET

TECHNYL A 218 V40 BK 21N

TECHNYL A 218 V40 BK 21N is a polyamide 66, reinforced with 40% of glass fibre, heat stabilized, for injection moulding. This grade offers an excellent combination between thermal and mechanical properties.

General

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

Product identification

ISO 1043 abbreviation	PA66-GF40
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Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.46
Water absorption	24 hr, 23°C	ISO 62	%	0.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.35
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	13000 / 9900
Stress at break		ISO 527-1/-2	MPa	215 / 145
Strain at break		ISO 527-1/-2	%	2.5 / 5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	11000 / 7800
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	85 / 90
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	15 / 19
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	14 / 18

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
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

	Condition	Standard	Unit	Value
Burning behaviour				
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Oxygen index			%	23.0

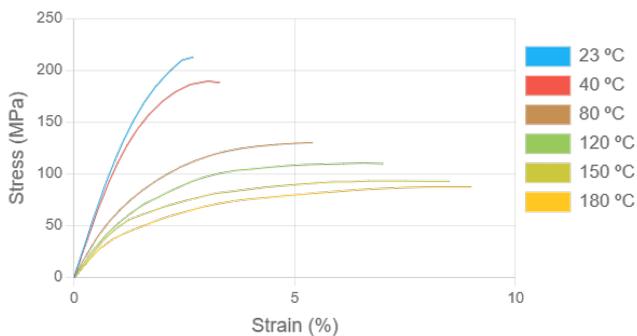
	Condition	Standard	Unit	Value
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	6.0E15
Comparative tracking index	Solution A	IEC 60112	V	400.0
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	35.0

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

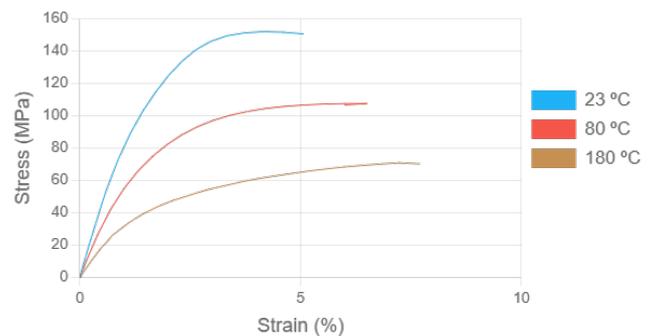
Stress-strain, dry

Temperature (°C)



Stress-strain, conditioned

Temperature (°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.