

TECHNICAL DATA SHEET

**TECHNYL RED A 218HPS V50 BK 21N**

TECHNYL RED A 218HPS V50 BK 21N is a polyamide blend of polyamide 6.6 polyamide 6 reinforced with 50% of glass fiber, high heat stabilized for injection moulding. This grade is designed to offer a long term heat resistance and is suitable to work in environments characterized by a very high temperature (210°C).

**General**

Feature	Heat-aging stabilized High stiffness	Good surface finish heat resistant
Polymer type	(PA66 + PA6) blend	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications	
Colors available	Black	
Forms	Pellets	

**Product identification**

ISO 1043 abbreviation	PA66+PA6-GF50
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Condition	Standard	Unit	Value
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**Physical properties**

Density		ISO 1183	g/cm <sup>3</sup>	1.56
Water absorption	24 hr, 23°C	ISO 62	%	0.16
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	0.45

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	Condition	Standard	Unit	Value
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<b>Mechanical properties</b>				
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	17500 / 10400
Stress at break		ISO 527-1/-2	MPa	238 / 154
Strain at break		ISO 527-1/-2	%	2.7 / 5.4
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	14000 / 9440
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	368 / 252
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	97 / -
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	100 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	18 / 25
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	16 / -

**Thermal properties**

Melting temperature, 10°C/min		ISO 11357-1	°C	250
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	254
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	232

\*: 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.

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