

TECHNICAL DATA SHEET

## TECHNYL D 218 V30 BK

### TECHNYL eXten D 218 V30 BLACK

TECHNYL D 218 V30 BK is a polyamide 6.10, reinforced with 30% of glass fibre, heat stabilized, for injection moulding. This grade offers excellent chemical resistance, low water absorption, very good mechanical properties and moldability. It is a partially bio-sourced material.

#### General

Certifications	RoHS	EC 1907/2006 (REACH)
Polymer type	PA610	
Feature	heat-aging stabilized contains renewable content	chemical resistant low moisture absorption
Applications	connectors	home & office furniture
Colors available	black	natural
Forms	pellets	
Processing technology	injection moulding	

#### Product identification

ISO 1043 abbreviation	PA610-GF30
ISO 16396 designation	PA610,GF30,MH,S14-110

Condition	Standard	Unit	Value
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#### Physical properties

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm <sup>3</sup>	1.3	
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.4
Water absorption	24 hr, 23°C	ISO 62	%	0.4
Molding shrinkage, parallel	ISO 294-4, 2577	%	0.3 - 0.4	
Molding shrinkage, normal	ISO 294-4, 2577	%	0.5 - 0.6	

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	8800 / 6000
Stress at break		ISO 527-1/-2	MPa	160 / 110
Strain at break		ISO 527-1/-2	%	4 / 7.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7050 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	200 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	90 / 85
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	85 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	14 / -

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

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	215
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	213
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	198

	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	240 - 250 °C
Middle temperature	245 - 255 °C
Front temperature	250 - 260 °C
Recommended mould temperature	60 - 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.