

TECHNICAL DATA SHEET

TECHNYL C 216 V18 NC

TECHNYL C 216 V18 NC is a reinforced polyamide 6 with 18% of glass fiber, for injection moulding. This grade has good mechanical properties and offering an excellent combination between thermal and mechanical properties.

General

Polymer type	PA6 (Polyamide 6)		
Processing technology	Injection molding		
Certification	RoHS	EC 1907/2006 (REACH)	
Colors available	Natural		
Forms	Pellets		

Product identification

ISO 1043 abbreviation	PA6-GF18
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Condition

Standard

Unit

Value

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.24
Water absorption	24 hr, 23°C	ISO 62	%	1.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.2
Molding shrinkage, normal		ISO 294-4, 2577	%	0.85

Mechanical properties

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	Condition	Standard	Unit	Value
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	6700 / 3400
Stress at break		ISO 527-1/-2	MPa	150 / 90
Strain at break		ISO 527-1/-2	%	4 / 9
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	6500 / 3300
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	55 / 65
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	7 / 23
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	8 / 16

Thermal properties

	Condition	Standard	Unit	Value
Melting temperature, 10°C/min		ISO 11357-1	°C	222
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	180

	Condition	Standard	Unit	Value
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+014
Comparative tracking index	Solution A	IEC 60112	V	550
CTI performance level category		Sol A		PLC 1

Burning behaviour

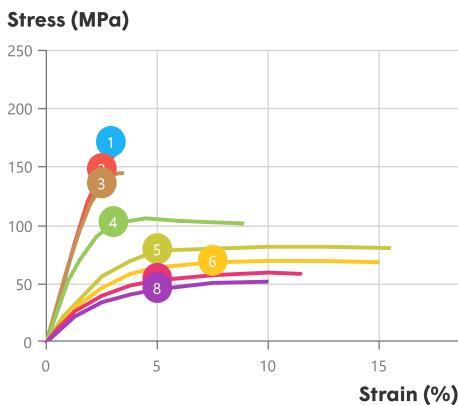
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Flammability, 3.0 mm	3.0 mm	UL 94		HB
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650

*: conditioned according to ISO 1110

Processing conditions

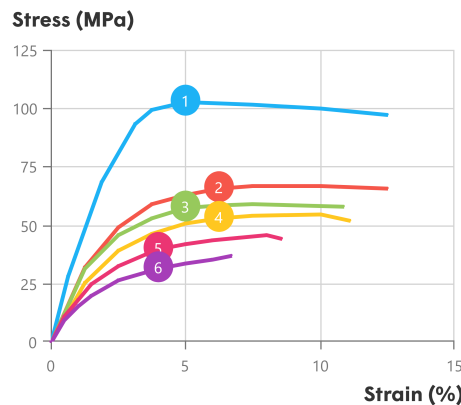
Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	230 - 235 °C
Middle temperature	235 - 240 °C
Front temperature	240 - 250 °C
Recommended mould temperature	60 - 90 °C

Stress-strain, dry



Temperature (°C)	
1	Spannung 1
2	Spannung 2
3	Spannung 3
4	Spannung 4
5	Spannung 5
6	Spannung 6

Stress-strain, conditioned



Temperature (°C)	
1	Spannung 3
2	Spannung 5
3	Spannung 6
4	Spannung 8
5	Spannung 9
6	Spannung 10

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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