TECHNYL®

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TECHNICAL DATA SHEET

TECHNYL C 218 V30 BK 21N

TECHNYL C 218 V30 BK 21N is a polyamide 6, reinforced with 30% of glass fiber, heat stabilized, for injection moulding. The product offers an excellent combination between thermal and mechanical properties.

General

Feature	Heat-aging stabilized	
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Applications	Automotive Applications Electrical/Electronic Applications	Connectors
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-GF30

Physical properties

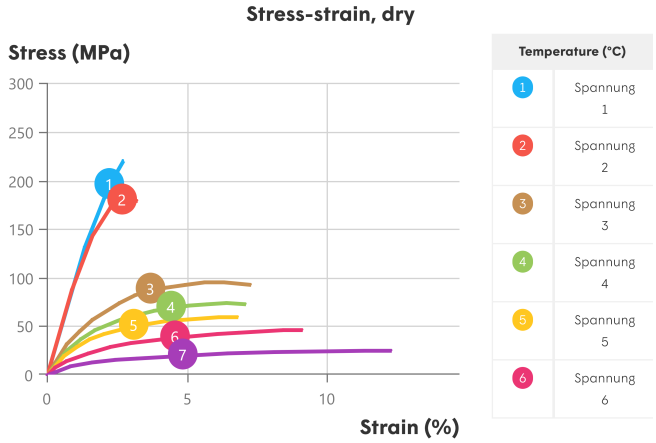
	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.36
Water absorption	24 hr, 23°C	ISO 62	%	1.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	0.75

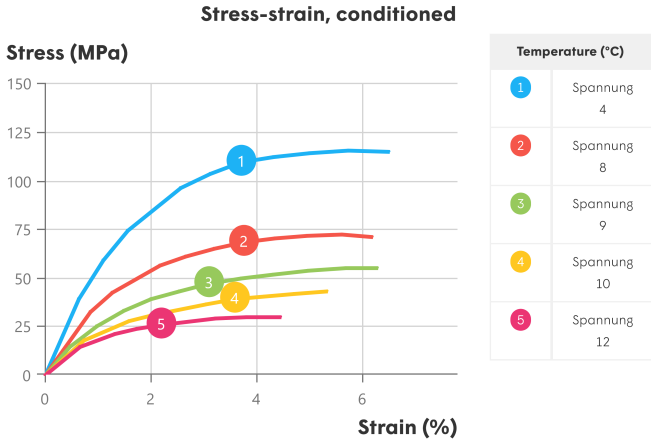
	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 6000
Stress at break		ISO 527-1/-2	MPa	180 / 115
Strain at break		ISO 527-1/-2	%	3.2 / 6.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	8500 / 5100
Flexural modulus, ASTM D790	2 mm/min	ASTM D790	MPa	8900 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	250 / 160
Flexural strength, ASTM D790	2 mm/min	ASTM D790	MPa	255 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	75 / 90
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	60 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	10 / 18
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	8 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	11 / 19
Izod notched impact strength, -30°C	-30°C	ISO 180/1A	kJ/m²	8.5 / -
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	222
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	218
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	208
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	400
CTI performance level category		Sol A		PLC 1
Burning behaviour				
UL Yellow Card availability (UL)	Click here to have access to the UL Yellow Card → QMFZ2.E44716			
Flammability, 0.40 mm	0.40 mm	UL 94		HB
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Oxygen index			%	23

**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	240 - 250 °C
Middle temperature	250 - 270 °C
Front temperature	260 - 290 °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.

Disclaimer

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