

TECHNICAL DATA SHEET

TECHNYL C 218 V50 BK
(Previously DOMAMID 6LVG50H2 BK)

Polyamide 6, 50% glass fiber reinforced, heat-aging stabilized, improved flowability, for injection moulding, black

General

Feature	Heat-aging stabilized	Improved flowability
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-GF50
ISO 16396 designation	PA6,GF50,M1H,S12-160

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.56
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.3 - 1.6
Water absorption	24 hr, 23°C	ISO 62	%	4.5 - 5.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.15 - 0.35
Molding shrinkage, normal		ISO 294-4, 2577	%	0.75 - 0.95
Viscosity number	96% H2SO4	ISO 307	cm ³ /g	125

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	Condition	Standard	Unit	Value
Mechanical properties			dam / cond.*	
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	16500 / 11000
Stress at break	5 mm/min	ISO 527-1/-2	MPa	225 / 145
Strain at break	5 mm/min	ISO 527-1/-2	%	2.5 / 4.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	13000 / 10000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	360 / 240
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	90 / 90
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	90 / 90
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	15 / 25
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	12 / 14

Thermal properties

Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	220
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	210
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	215

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+015
Surface resistivity		IEC 62631-3-1	ohm	1E+014

Burning behaviour

Flammability, 0.75 mm	0.75 mm	UL 94		HB
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

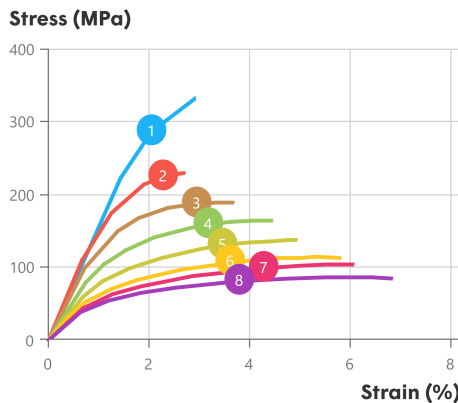
Test run at 23°C if not differently specified, DAM state (dry as moulded).
*: conditioned according to ISO 1110

Processing conditions

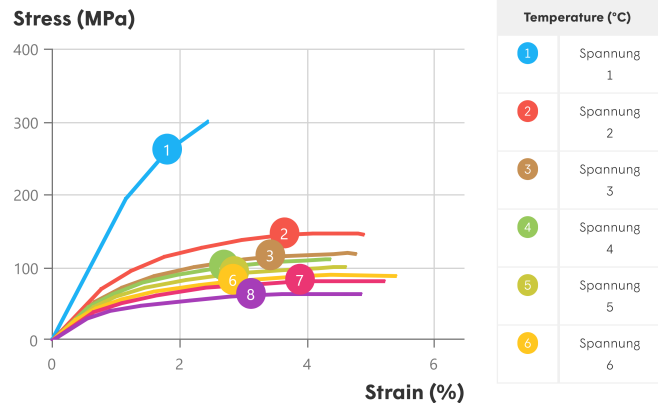
Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Recommended melt temperature	250 - 290 °C
Recommended mould temperature	80 - 100 °C

These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

Stress-strain, dry



Stress-strain, conditioned



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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