

TECHNICAL DATA SHEET

TECHNYL C 218 V15 BK D

(Previously DOMAMID 6G15H2 BK)

Polyamide 6, 15% glass fiber reinforced, heat-aging stabilized, for injection moulding, black

General

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

Product identification

ISO 1043 abbreviation	PA6-GF15
ISO 16396 designation	PA6,GF15,MH,S14-060

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.24
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.7 - 3.1
Water absorption	24 hr, 23°C	ISO 62	%	1.7 - 1.8
Water absorption, saturation			%	7.9
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.4 - 0.6
Molding shrinkage, normal		ISO 294-4, 2577	%	0.7 - 0.9

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	6000 / 3200
Stress at break	5 mm/min	ISO 527-1/-2	MPa	120 / 70
Strain at break	5 mm/min	ISO 527-1/-2	%	2.5 / 12
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	4800 / 2800
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	185 / 100
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	30 / 100
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	30 / 35
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	7 / 9.5
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	5 / 4.5
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	28 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	6 / -

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	215
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	190
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	210

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+012
Comparative tracking index	Solution A	IEC 60112	V	450
CTI performance level category		Sol A		PLC 1

Burning behaviour

Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min
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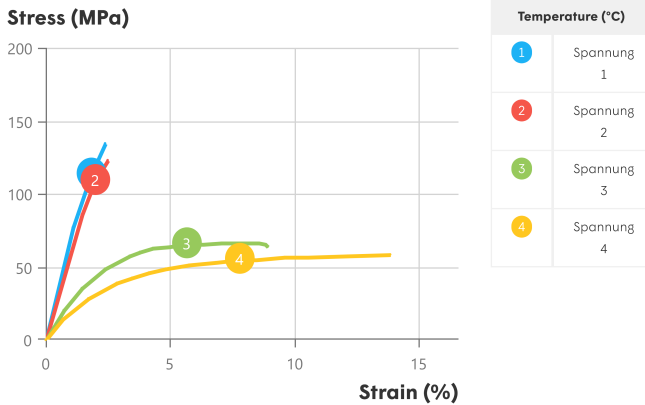
Test run at 23°C if not differently specified, DAM state (dry as moulded).
 *: conditioned according to ISO 1110

Processing conditions

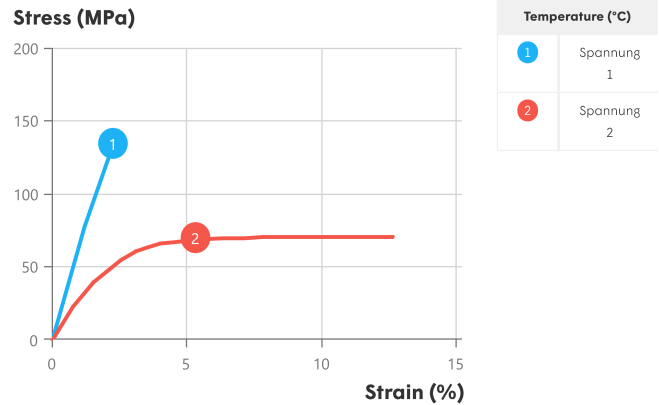
Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Suggested max moisture	0.2 %
Rear temperature	230 - 235 °C
Middle temperature	235 - 240 °C
Front temperature	240 - 250 °C
Recommended melt temperature	230 - 250 °C
Recommended mould temperature	60 - 90 °C

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.

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