

TECHNICAL DATA SHEET

TECHNYL C 216 V40 BK

(Previously DOMAMID 6LVG40 300 BK)

Polyamide 6, 40% glass fiber reinforced, improved flowability, for injection moulding, black

General

Feature	Good stiffness	
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-GF40
ISO 16396 designation	PA6,GF40,M1,S12-120

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.45
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.1
Water absorption	24 hr, 23°C	ISO 62	%	1.3 - 1.4
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.1 - 0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	0.5 - 0.7
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm ³ /10 min	45
Viscosity number	96% H2SO4	ISO 307	cm ³ /g	125

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	12000 / 7300
Stress at break	5 mm/min	ISO 527-1/-2	MPa	200 / 125
Strain at break	5 mm/min	ISO 527-1/-2	%	2.7 / 5.6
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	10700 / 7300
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	310 / 160
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	85 / 85
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	13 / 21
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	10 / 10

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	210
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	218

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+014

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)
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.

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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