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TECHNICAL DATA SHEET

TECHNYL C 216 V50 BK

(Previously DOMAMID 6G50FC 300 BK)

Polyamide 6, 50% glass fiber reinforced, for injection moulding, black

General

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-GF50
ISO 16396 designation	PA6,GF50,M1,S14-160

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm³	1.56
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3 - 0.5
Molding shrinkage, normal		ISO 294-4, 2577	%	1 - 1.2
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm³/10 min	22
Viscosity number	96% H2SO4	ISO 307	cm³/g	145
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	17000 / 11100
Stress at break	5 mm/min	ISO 527-1/-2	MPa	220 / 145
Strain at break	5 mm/min	ISO 527-1/-2	%	2.5 / 4.4
Yield stress	5 mm/min	ISO 527-1/-2	MPa	215 / 145
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	13300 / 8250
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	100 / 100
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	14 / 25

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Thermal properties

	Condition	Standard	Unit	Value
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

Burning behaviour

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.

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