

## TECHNICAL DATA SHEET

# TECHNYL C 216 V50 BK Z

(Previously DOMAMID 6LVG50 300 BK)

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

TECHNYL C 216 V50 BK Z is a polyamide 6, reinforced with 50% of glass fibre, for injection moulding. This grade offers high mechanical strength, high surface aspect by easy flow & low pressure moulding for injection moulding.

### General

Feature	Improved flowability High stiffness	High dimensional stability
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications Industrial Applications	Consumer good application
Colors available	Black	
Forms	Pellets	

### Product identification

ISO 1043 abbreviation	PA6-GF50
ISO 16396 designation	PA6,GF50,M1,S12-160

Condition	Standard	Unit	Value
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### Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm <sup>3</sup>	1.56
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.2 - 2.4
Water absorption	24 hr, 23°C	ISO 62	%	1.4 - 1.5
Water absorption, saturation			%	6.2
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.15 - 0.35
Molding shrinkage, normal		ISO 294-4, 2577	%	0.75 - 0.95
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm <sup>3</sup> /10 min	30
Viscosity number	96% H2SO4	ISO 307	cm <sup>3</sup> /g	125

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	16500 / 10500
Stress at break	5 mm/min	ISO 527-1/-2	MPa	220 / 135
Strain at break	5 mm/min	ISO 527-1/-2	%	2.5 / 5.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	15000 / 9000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	330 / 220
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	90 / 110
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	85 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	15 / 20
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m <sup>2</sup>	12 / 13

### 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+013
Surface resistivity		IEC 62631-3-1	ohm	1E+014

*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	235 - 240 °C
Middle temperature	240 - 250 °C
Front temperature	250 - 260 °C
Recommended melt temperature	235 - 260 °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.*

### 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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