TECHNYL®

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TECHNICAL DATA SHEET

TECHNYL C 219 V30 BK

(Previously DOMAMID 6G30H1 BK)

Polyamide 6, 30% glass fiber reinforced, organic heat stabilized, electro-friendly, for injection molding, black

General

Feature	Electro-friendly	Organic heat stabilized
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-GF30
ISO 16396 designation	PA6,GF30,M1,S14-100

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.36
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.2 - 2.4
Water absorption, saturation			%	6
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.1 - 0.3
Molding shrinkage, normal		ISO 294-4, 2577	%	0.7 - 0.9
Bulk density			g/cm³	0.65

	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 6200
Stress at break		ISO 527-1/-2	MPa	180 / 115
Strain at break		ISO 527-1/-2	%	3.5 / 8.1
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	8000 / 5000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	280 / 180
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	80 / 95
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	65 / 65
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	12 / 19
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	9.5 / 9
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
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), valid for black products.
**: conditioned according to ISO 1110*

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Rear temperature	250 - 270 °C
Middle temperature	260 - 280 °C
Front temperature	260 - 290 °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

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