

TECHNICAL DATA SHEET

TECHNYL C 219S V30 BK 21N

DOMAMID 6G30H1 BK99

Polyamide 6, 30% glass fiber reinforced, heat-aging stabilized, for injection moulding

General

Certifications	RoHS EC 1907/2006 (REACH)	UL listed product
Polymer type	PA6	
Feature	organic heat stabilized	
Colors available	black	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6-GF30
ISO 16396 designation	PA6,GF30,MH,S14-090

Condition	Standard	Unit	Value
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Physical properties

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm ³	1.36	
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			%	6.1
Molding shrinkage, parallel	ISO 294-4, 2577	%		0.3 - 0.5
Molding shrinkage, normal	ISO 294-4, 2577	%		0.8 - 1.0
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm ³ /10 min	45.0
Viscosity number	96% H2SO4	ISO 307	cm ³ /g	145.0

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	9500 / 6000
Stress at break	5 mm/min	ISO 527-1/-2	MPa	170 / 105
Strain at break	5 mm/min	ISO 527-1/-2	%	3 / 6
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	8200 / 5000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	250 / 150
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	85 / 100
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	70 / 90
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	13 / 24
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	9 / 19
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	75 / 85
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	13 / 25
Rockwell hardness		ISO 2039/2	ScaleR	122 / -

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
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	200
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	215

Condition	Standard	Unit	Value
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Burning behaviour

UL Yellow Card availability 1	Click here to have access to the UL Yellow Card availability 1 -> E170540-225450			
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Flammability, 3.0 mm	3.0 mm	UL 94		HB
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	650
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Condition	Standard	Unit	Value
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Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1.0E16
Surface resistivity		IEC 62631-3-1	ohm	1.0E13
Comparative tracking index	Solution A	IEC 60112	V	600.0
CTI performance level category		Sol A		PLC 0
Dielectric strength	1 mm	IEC 60243-1	kV/mm	23.0

Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)			
Recommended melt temperature	240 - 270 °C			
Recommended mould temperature	90 - 100 °C			

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.