

TECHNICAL DATA SHEET

TECHNYL C 216 V20 NC

DOMAMID 6G20 300 NC / DOMAMID 6G20 NC

Polyamide 6, 20% glass fiber reinforced, for injection moulding, natural color

General

Certifications	RoHS	UL listed product
Polymer type	PA6	
Feature	not heat stabilized	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6-GF20
ISO 16396 designation	PA6,GF20,M,S14-060

Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.27
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.1 - 1.2
Water absorption	24 hr, 23°C	ISO 62	%	>=6.0
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.3 - 0.5
Molding shrinkage, normal		ISO 294-4, 2577	%	0.8 - 1.0

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	7000 / 4200
Stress at break	5 mm/min	ISO 527-1/-2	MPa	145 / 85
Strain at break	5 mm/min	ISO 527-1/-2	%	3.5 / 5.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	6000 / 3000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	200 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	65 / 75
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	45 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	9 / 17
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	9 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	60 / 80
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	9 / 19

*: **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	210
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	195
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	210

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 -> E329653-100458649			
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	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	1.0E14
Comparative tracking index	Solution A	IEC 60112	V	500.0
CTI performance level category		Sol A		PLC 1

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	230 - 235 °C
Middle temperature	235 - 240 °C
Front temperature	240 - 250 °C
Recommended melt temperature	230 - 250 °C
Recommended mould temperature	60 - 90 °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

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Injection advice

considered.,The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.