

TECHNICAL DATA SHEET

TECHNYL A 219 V40 NC

DOMAMID 66G40H1 NC

Polyamide 66, 40% glass fiber reinforced, heat-aging stabilized, for injection moulding, natural color

General

Polymer type	PA66		
Certifications	RoHS	UL listed product	
Feature	good stiffness	organic heat stabilized	
Processing technology	injection moulding		

Product identification

ISO 1043 abbreviation	PA66-GF40
ISO 16396 designation	PA66,GF40,MH,S14-120

Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.46
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.8 - 1.9
Water absorption	24 hr, 23°C	ISO 62	%	0.5 - 0.6
Water absorption, saturation			%	4.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.2 - 0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	0.6 - 0.8
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm ³ /10 min	15.0
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	13000 / 9500
Stress at break		ISO 527-1/-2	MPa	215 / 150
Strain at break		ISO 527-1/-2	%	2.8 / 4.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	11500 / 8500
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	310 / 250
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	95 / 100
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	15 / 20
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	11 / 12
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	90 / 95
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	14 / 20

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	262
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	255
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	250
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	250

	Condition	Standard	Unit	Value
Burning behaviour				
UL Yellow Card availability 1	Click here to have access to the UL Yellow Card availability 1 -> E170540-100081028			
Flammability, 0.75 mm	0.75 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	1.0E14
Comparative tracking index	Solution A	IEC 60112	V	550.0
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)
Recommended melt temperature	270 - 290 °C
Recommended mould temperature	90 - 110 °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.