

TECHNICAL DATA SHEET

TECHNYL A 218 V25 BK 21N

TECHNYL A 218 V25 BK 21N is a polyamide 66, reinforced with 25% of glass fibre, heat stabilized, for injection moulding. This grade offers an excellent combination between thermal and mechanical properties.

General

Feature	Heat-aging stabilized	
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Applications	Automotive Applications Handles	Consumer good application Industrial Applications
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF25
ISO 16396 designation	PA66,GF250,M1,S14-090

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.32
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.3 - 2.5
Water absorption	24 hr, 23°C	ISO 62	%	0.8 - 0.9
Water absorption, saturation			%	5.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	1.1

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	Condition	Standard	Unit	Value
Mechanical properties			dam / cond.*	
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	8600 / 6000
Stress at break		ISO 527-1/-2	MPa	175 / 120
Strain at break		ISO 527-1/-2	%	3 / 6
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	7600 / 6000
Flexural modulus, ASTM D790	2 mm/min	ASTM D790	MPa	7300 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	250 / 180
Flexural strength, ASTM D790	2 mm/min	ASTM D790	MPa	260 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	60 / 75
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	55 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	9 / 11.5
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	7 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	55 / 70
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	8.5 / 12

Thermal properties

Melting temperature, 10°C/min		ISO 11357-1	°C	262
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	250

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	6E+015
Comparative tracking index	Solution A	IEC 60112	V	400
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	32

Burning behaviour

UL Yellow Card availability 	Click here to have access to the UL Yellow Card → QMFZ2.E44716			
Flammability, 0.75 mm	0.75 mm	UL 94		HB
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, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Oxygen index			%	23
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

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*: conditioned according to ISO 1110

Condition

Standard

Unit

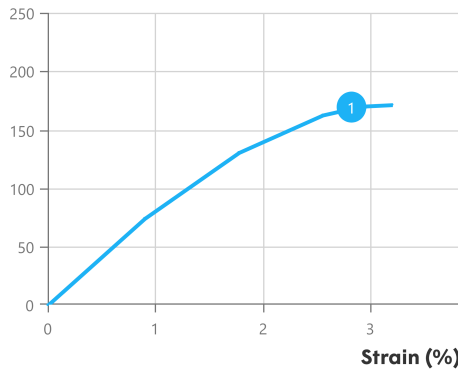
Value

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended mould temperature	70 - 100 °C

Stress-strain, dry

Stress (MPa)

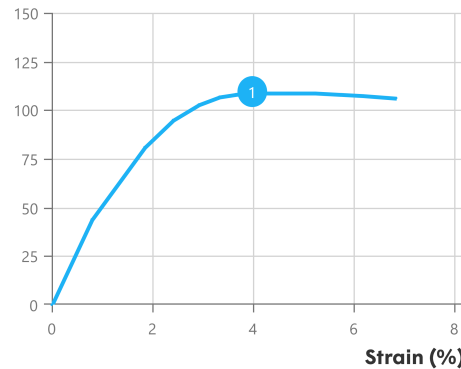


Temperature (°C)

Spannung
1

Stress-strain, conditioned

Stress (MPa)



Temperature (°C)

Spannung
4

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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