

TECHNICAL DATA SHEET

TECHNYL A 218 NC

TECHNYL A 218 NC is an unreinforced polyamide 66, standard viscosity, heat stabilized for injection moulding. This grade offers all the primary properties of unreinforced polyamide 66. In addition, it has improved resistance to high temperature, and can be used for components which will withstand long-term temperature stresses

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 Electrical/Electronic Applications	Connectors Fasteners
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66
ISO 16396 designation	PA66

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.14
Water absorption	24 hr, 23°C	ISO 62	%	1.3
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.6
Molding shrinkage, normal		ISO 294-4, 2577	%	1.6

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3100 / 1300
Stress at break		ISO 527-1/-2	MPa	55 / 65
Strain at break		ISO 527-1/-2	%	30 / 300
Yield stress		ISO 527-1/-2	MPa	85 / 50
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	3000 / 1300
Flexural modulus, ASTM D790	2 mm/min	ASTM D790	MPa	3300 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	120 / 70
Flexural strength, ASTM D790	2 mm/min	ASTM D790	MPa	125 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	5 / 15
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	4.5 / 10


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	82

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+015
Comparative tracking index	Solution A	IEC 60112	V	550
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	18

Burning behaviour

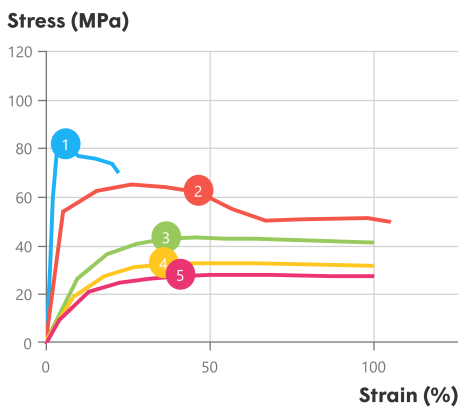
UL Yellow Card availability 	Click here to have access to the UL Yellow Card → File Number: E44716			
Flammability, 0.75 mm	0.75 mm	UL 94		V2
Flammability, 1.5 mm	1.5 mm	UL 94		V2
Flammability, 3.0 mm	3.0 mm	UL 94		V2
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

*: conditioned according to ISO 1110

Processing conditions

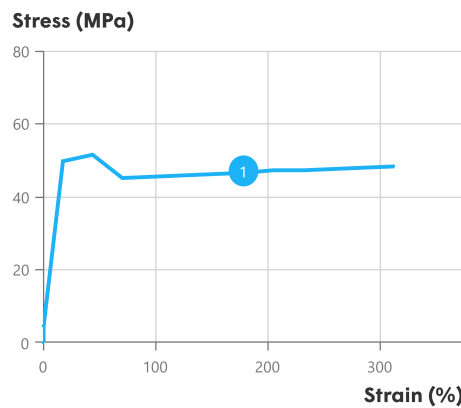
Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended mould temperature	70 - 100 °C

Stress-strain, dry



Temperature (°C)	
1	Spannung 1
2	Spannung 2
3	Spannung 3
4	Spannung 4
5	Spannung 5

Stress-strain, conditioned



Temperature (°C)	
1	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 unfilled polyamides, Domo recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (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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