

TECHNICAL DATA SHEET

TECHNYL A 218 S30 NC

TECHNYL A 218 S30 NC is a Polyamide PA66, reinforced with 30% of glass spheres, Heat stabilised, for injection moulding. This grade offers an excellent combination between thermal and mechanical properties.

General

Polymer type	PA66		
Certifications	RoHS	EC 1907/2006 (REACH)	
Feature	heat-aging stabilized low warpage	good surface finish	
Applications	automotive applications		
Colors available	black	natural	
Forms	pellets		
Processing technology	injection moulding		

Product identification

ISO 1043 abbreviation	PA66-GB30
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Condition	Standard	Unit	Value
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Physical properties

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm ³	1.35	
Humidity absorption	T=23°C, 50% RH (equivalent ISO 1110)	ISO 62	%	2.1 - 2.2
Water absorption	24 hr, 23°C, immersion in water, thickness 2mm	ISO 62	%	1.2
Molding shrinkage, parallel	ISO 294-4, 2577	%		1.3 - 1.5
Molding shrinkage, normal	ISO 294-4, 2577	%		1.2 - 1.4

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	4700 / 1700
Stress at break	5mm/min	ISO 527-1/-2	MPa	85 / 45
Strain at break	5mm/min	ISO 527-1/-2	%	6.5 / 30
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	3850 / 1500
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	135 / 65
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	21 / No Break
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	21 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	2.5 / 7.5
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	2 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	2 / 5

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	261
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	95

	Condition	Standard	Unit	Value
Burning behaviour				
UL Yellow Card availability 1	<u>Click here to have access to the UL Yellow Card availability 1 -> QMFZ2.E44716</u>			
Flammability, 3.0 mm	3.0 mm	UL 94		HB
Oxygen index			%	25.0
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100 mm/min

Condition	Standard	Unit	Value
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Electrical properties

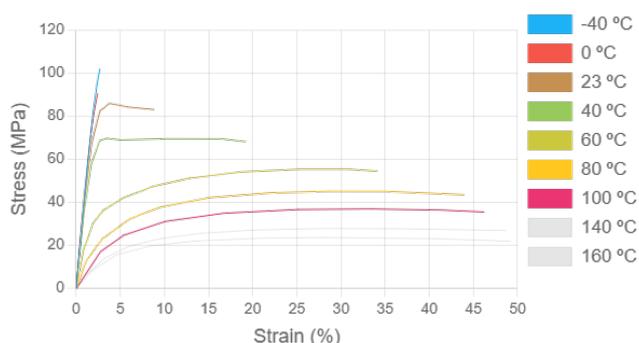
Volume resistivity		IEC 62631-3-1	ohm.m	5.0E12
Surface resistivity		IEC 62631-3-1	ohm	5.0E14
Comparative tracking index	Solution A	IEC 60112	V	400.0
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	30.0

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)



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.