

TECHNICAL DATA SHEET

TECHNYL A 218G V30 NC

TECHNYL A 218G V30 NC is a polyamide 66, reinforced with 30% of glass fiber, heat stabilized, for injection moulding. This grade has been specially designed to improve its resistance to automotive cooling liquids, increasing lifetime of parts in permanent contact with such liquids.

General

Polymer type	PA66		
Certifications	RoHS	EC 1907/2006 (REACH)	
Feature	heat-aging stabilized	glycol resistant	
Colors available	natural		
Forms	pellets		
Processing technology	injection moulding		

Product identification

ISO 1043 abbreviation	PA66-GF30
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Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.36
Water absorption	24 hr, 23°C	ISO 62	%	0.8
Water absorption, saturation			%	5.3
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	1.1

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	10000 / 7500
Stress at break		ISO 527-1/-2	MPa	195 / 120
Strain at break		ISO 527-1/-2	%	3.3 / 7
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	9000 / 6500
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	290 / 200
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m ²	85 / 95
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m ²	70 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	12 / 16
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	11 / 16

*: **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	260
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	250

	Condition	Standard	Unit	Value
Burning behaviour				
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Oxygen index			%	23.0

Condition	Standard	Unit	Value
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Electrical properties

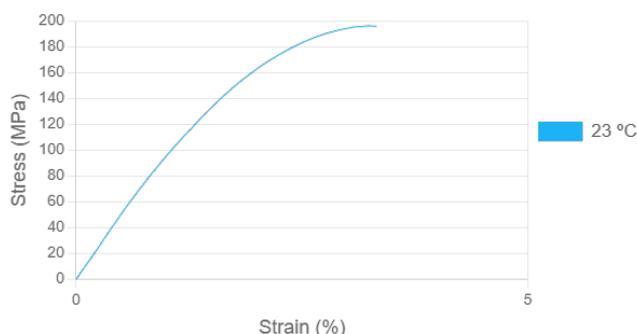
Volume resistivity		IEC 62631-3-1	ohm.m	5.0E14
Surface resistivity		IEC 62631-3-1	ohm	6.0E15
Comparative tracking index	Solution A	IEC 60112	V	400.0
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	34.0

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.15 %
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended mould temperature	70 - 100 °C

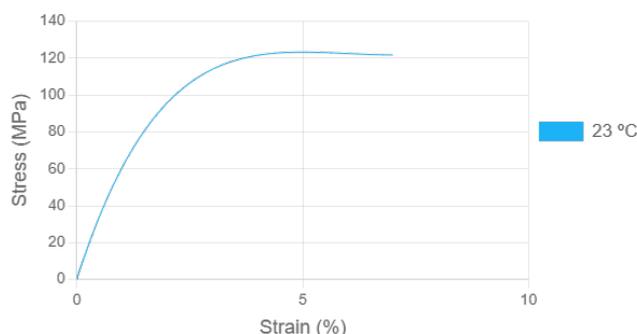
Stress-strain, dry

Temperature (°C)



Stress-strain, conditioned

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.