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TECHNICAL DATA SHEET

TECHNYL A 218 V50 NC T

The TECHNYL A 218 V50 NC T is a polyamide 66, 50% glass fiber reinforced, specially heat stabilized for high temperature, for injection moulding.

General

Feature	Heat-aging stabilized	
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Industrial Applications	
Colors available	Natural	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF50
ISO 16396 designation	PA66,GF50,M1H,S14-160

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.57
Humidity absorption	T=23°C, 50% RH	ISO 62	%	1.6 - 1.7
Water absorption	24 hr, 23°C	ISO 62	%	0.6
Water absorption, saturation			%	3.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.4 - 0.5
Molding shrinkage, normal		ISO 294-4, 2577	%	0.8 - 0.9

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	17000 / 12500
Stress at break		ISO 527-1/-2	MPa	260 / 175
Strain at break		ISO 527-1/-2	%	2 / 2.5
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	13500 / 10000
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	90 / 97
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	16 / 18
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	15 / 17
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	263
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	255
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	250
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	6E+014
Burning behaviour				
Flammability, 1.5 mm	1.5 mm	UL 94		V2
Oxygen index			%	23
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	260 - 270 °C
Middle temperature	270 - 280 °C
Front temperature	280 - 290 °C
Recommended mould temperature	60 - 100 °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.

Disclaimer

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