

TECHNICAL DATA SHEET

TECHNYL A 221T1 NC S

TECHNYL A 221T1 NC S is an unfilled polyamide 66, with a special crystallizing agent for very fast cycles, with improved thermal stability, for injection moulding. This grade offers a good combination between primary properties of the unreinforced polyamide 66 and processing properties leading to increased productivity. These performances are associated with excellent dimensional stability and good rigidity of moulded parts. It is designed to be used in food contact applications.

General

Polymer type	PA66		
Certifications	RoHS	EC 1907/2006 (REACH)	
Feature	fast molding cycle	good surface finish	
Applications	connectors		
Colors available	natural		
Forms	pellets		
Processing technology	injection moulding		

Product identification

ISO 1043 abbreviation	PA66		
ISO 16396 designation	PA66,M,S14-030		

Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.14
Water absorption	24 hr, 23°C	ISO 62	%	1.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.3
Molding shrinkage, normal		ISO 294-4, 2577	%	1.3

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3500 / 1600
Stress at break		ISO 527-1/-2	MPa	90 / 40
Strain at break		ISO 527-1/-2	%	6.5 / 100
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	3400 / 1500
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	120 / 50
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	4 / 12

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
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	195
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	85

	Condition	Standard	Unit	Value
Burning behaviour				
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	700

	Condition	Standard	Unit	Value
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	1.0E15
Dielectric strength	1 mm	IEC 60243-1	kV/mm	22.0

Processing conditions

Drying temperature/time	80 °C
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Processing conditions

Suggested max moisture	0.2 %
Rear temperature	265 - 275 °C
Middle temperature	270 - 280 °C
Front temperature	280 - 285 °C
Recommended mould temperature	60 - 80 °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 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.