TECHNYL®

DOMO caring is our formula

TECHNICAL DATA SHEET

TECHNYL A 217 NC S

TECHNYL A 217 NC S is an unreinforced polyamide 66, heat stabilized, standard viscosity, for injection moulding. This grade offers all the primary properties of unreinforced polyamide 66. In addition it has improved resistance to high temperature and it can be used for components which have to withstand mid term temperature stresses. This grade can also be vacuum metalized with very good surface quality and adhesion of the aluminum surface.

General

Certifications	RoHS EC 1907/2006 (REACH)	UL listed product EN 45545
Polymer type	PA66	
Feature	heat-aging stabilized	
Applications	connectors	
Colors available	black	natural
Forms	pellets	
Processing technology	injection moulding	

Product identification

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

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.14
Humidity absorption	T=23°C, 50% RH	ISO 62	%	3.1 - 3.2
Water absorption	24 hr, 23°C	ISO 62	%	1.2 - 1.3
Water absorption, saturation			%	8.3
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.5
Molding shrinkage, normal		ISO 294-4, 2577	%	1.7

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3200 / 1500
Stress at break		ISO 527-1/-2	MPa	55 / 50
Strain at break		ISO 527-1/-2	%	30 / 100
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2900 / 1450
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	120 / 50
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	75 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	5.5 / 14
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	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	220
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	75

	Condition	Standard	Unit	Value
Burning behaviour				
UL Yellow Card availability 1	**Click here to have access to the UL Yellow Card availability 1 -> QMFZ2.E44716**			
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 mm/min

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	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
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.