

TECHNICAL DATA SHEET

TECHNYL A 246M BK 21N

TECHNYL A 246M BK 21N is an unfilled polyamide 6.6, impact modified, for injection moulding. This grade offers an excellent impact resistance, even at low temperature.

General

Certifications	RoHS EC 1907/2006 (REACH)	UL listed product
Polymer type	PA66	
Feature	high impact resistant	low temperature impact resistant
Applications	automotive applications footwear power tool / garden equipment	consumer applications outdoor applications sport
Colors available	black	natural
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66
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Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.08
Water absorption	24 hr, 23°C	ISO 62	%	1.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.6
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	1900 / 600
Stress at break		ISO 527-1/-2	MPa	44 / 35
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	1800 / 700
Flexural modulus, ASTM D790	2 mm/min	ASTM D790	MPa	1800 / -
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	70 / 27
Flexural strength, ASTM D790	2 mm/min	ASTM D790	MPa	70 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	97 / 100
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	60 / 80
Izod notched impact strength, -30°C	-30°C	ISO 180/1A	kJ/m ²	22 / -

*: **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, 1.80 MPa	1.80 MPa	ISO 75	°C	65

	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, 1.5 mm	1.5 mm	UL 94		HB
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	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.