

TECHNICAL DATA SHEET

TECHNYL A 238 BK 21N

TECHNYL A 238 BK 21N is an unfilled polyamide 6,6, heat stabilized, impact modified, for injection moulding. This grade offers excellent combination between rigidity and impact resistance at ambient temperature.

General

Polymer type	PA66	
Certifications	RoHS	EC 1907/2006 (REACH)
Feature	heat-aging stabilized	high impact resistant
Applications	automotive applications consumer applications sport	connectors industrial applications
Colors available	black	natural
Forms	pellets	
Processing technology	injection moulding	

Product identification

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

Condition	Standard	Unit	Value
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Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.1
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.9
Water absorption	24 hr, 23°C	ISO 62	%	1.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.9
Molding shrinkage, normal		ISO 294-4, 2577	%	1.7

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	2700 / 1200
Stress at break		ISO 527-1/-2	MPa	50 / 40
Strain at break		ISO 527-1/-2	%	25 / 100
Yield stress		ISO 527-1/-2	MPa	70 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2250 / 1200
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	95 / 45
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	8 / 20
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	8 / 16

*: **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	180
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	70

	Condition	Standard	Unit	Value
Burning behaviour				
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
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	1.0E14
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.