

## 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

Feature	Heat-aging stabilized	High impact resistant
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications Consumer good application Sport	Connectors Industrial Applications
Colors available	Black	Natural
Forms	Pellets	

### Product identification

ISO 1043 abbreviation	PA66
ISO 16396 designation	PA66-I,M1,S14-030

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm <sup>3</sup>	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
<b>Mechanical properties</b>				<b>dam / cond.*</b>
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 <sup>2</sup>	8 / 20
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	8 / 16

### 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

### Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+014
Dielectric strength	1 mm	IEC 60243-1	kV/mm	22

### Burning behaviour

Flammability, 1.5 mm	1.5 mm	UL 94		HB
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	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.

## Disclaimer

The information provided in this documentation corresponds to our technical knowledge at the date of its publication and do not constitute a specification. This information may be subject to revision at our discretion. Domo cannot anticipate all conditions under which this information and our products of other manufactures in combination with our products may be used. Domo accepts no responsibility for results obtained by the application of this information or for the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product or product combination for their own purposes. Unless otherwise agreed in writing, Domo sells the product without warranties. Buyers and users assume all responsibility and liability for loss or damage arising from handling and use of our products, whether used alone or in combination with other products. Unless specifically indicated, the grades mentioned are not suitable for applications in the pharmaceutical/medical sector.