

## TECHNICAL DATA SHEET

# TECHNYL A 238 V13 BK 21N

TECHNYL A 238 V13 BK 21N is a polyamide 6.6, reinforced with 13% of glass fiber, 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	Impact resistant
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Connectors Fasteners Industrial Applications	Consumer good application home & office furniture PC / laptop / tablet
Colors available	Black	Natural
Forms	Pellets	

### Product identification

ISO 1043 abbreviation	PA66-GF13
ISO 16396 designation	PA66,GF130,M1,S14-050

	Condition	Standard	Unit	Value
<b>Physical properties</b>				
Density		ISO 1183	g/cm <sup>3</sup>	1.2
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2 - 2.1
Water absorption	24 hr, 23°C	ISO 62	%	0.9
Water absorption, saturation			%	6.6
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.2 - 0.4
Molding shrinkage, normal		ISO 294-4, 2577	%	0.7 - 0.9

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	5300 / 3300
Stress at break		ISO 527-1/-2	MPa	100 / 60
Strain at break		ISO 527-1/-2	%	3 / 7.2
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	4450 / 2800
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	155 / 95
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	55 / 60
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	40 / 40
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	6 / 8
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m <sup>2</sup>	4.9 / 4.7
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m <sup>2</sup>	50 / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	6.5 / 8

### 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	228

### Burning behaviour

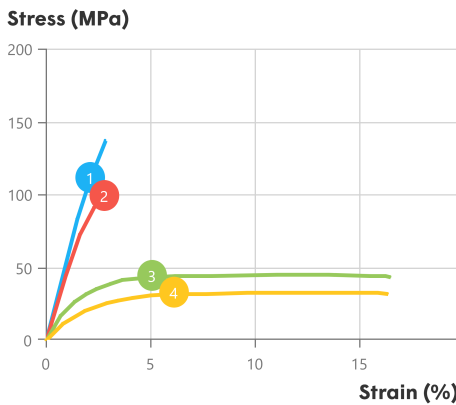
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

\*: conditioned according to ISO 1110

### Processing conditions

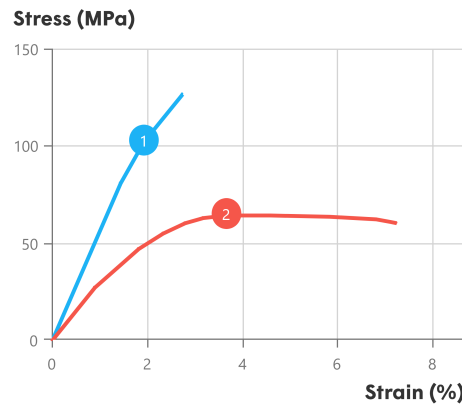
Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	270 - 280 °C
Middle temperature	275 - 285 °C
Front temperature	280 - 290 °C
Recommended mould temperature	70 - 100 °C

Stress-strain, dry



Temperature (°C)	
1	Spannung 1
2	Spannung 2
3	Spannung 3
4	Spannung 4

Stress-strain, conditioned



Temperature (°C)	
1	Spannung 1
2	Spannung 2

## 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 reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 / 1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 / 1.2379 (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

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