

## TECHNICAL DATA SHEET

# TECHNYL C 216 BK 9223 XB

(Previously DOMAMID 6 BK 9223 XB)

Polyamide 6, for injection moulding

### General

Feature	UL V2	
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Colors available	Black White	Grey
Forms	Pellets	

### Product identification

ISO 1043 abbreviation	PA6
ISO 16396 designation	PA6,M1,S14-030

	Condition	Standard	Unit	Value
<b>Physical properties</b>				
Density		ISO 1183	g/cm <sup>3</sup>	1.14
Water absorption	24 hr, 23°C	ISO 62	%	10
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.9 - 1.1
Molding shrinkage, normal		ISO 294-4, 2577	%	1 - 1.2
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm <sup>3</sup> /10 min	165
Viscosity number	96% H2SO4	ISO 307	cm <sup>3</sup> /g	145

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3200 / 1000
Strain at break	50 mm/min	ISO 527-1/-2	%	20 / 50
Yield stress	50 mm/min	ISO 527-1/-2	MPa	80 / 40
Yield strain	50 mm/min	ISO 527-1/-2	%	4 / 20
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2800 / 900
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	105 / 35
Charpy impact strength, +23°C	+23°C	ISO 179/1eU		NB / NB
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	150 / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	4.5 / 20
Izod impact strength, +23°C	+23°C	ISO 180/1U		NB / NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	4.5 / 19
Rockwell hardness		ISO 2039/2	ScaleR	120 / -


## Thermal properties

Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	175
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	65
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	200

## Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+016
Surface resistivity		IEC 62631-3-1	ohm	1E+014
Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0

## Burning behaviour

UL Yellow Card availability 	Click here to have access to the UL Yellow Card → <a href="https://www.ul.com/Products/Plastics/Engineering-Plastics/TECHNYL-C-216-BK-9223-XB">E170540-225449</a>			
Flammability, 0.75 mm	0.75 mm	UL 94		V2
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	750 - 850
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

*Test run at 23°C if not differently specified, DAM state (dry as moulded), valid for natural colored products.  
\*: conditioned according to ISO 1110*

## Processing conditions

Drying temperature/time	75-85°C / 2-4h (with dew point of dried air < -30 °C)
Recommended melt temperature	230 - 250 °C
Recommended mould temperature	60 - 90 °C

*These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.*

## 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

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