

TECHNICAL DATA SHEET

TECHNYL C 219 BK

(Previously DOMAMID 6H1 BK)

Polyamide 6, heat-aging stabilized, for injection moulding, black

General

Feature	UL V2	Heat-aging stabilized
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS	
Colors available	Black	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6
ISO 16396 designation	PA6,M1H,S14-030

	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	1.13
Humidity absorption	T=23°C, 50% RH	ISO 62	%	3.3 - 3.5
Water absorption	24 hr, 23°C	ISO 62	%	1.9 - 2
Water absorption, saturation			%	9.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	1 - 1.2
Molding shrinkage, normal		ISO 294-4, 2577	%	1 - 1.2
Viscosity number	96% H2SO4	ISO 307	cm ³ /g	145

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	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3000 / 1200
Yield stress		ISO 527-1/-2	MPa	80 / 45
Yield strain		ISO 527-1/-2	%	4 / 20
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2500 / 900
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	110 / 35
Charpy impact strength, +23°C	+23°C	ISO 179/1eU		NB / NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	4 / 20
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m ²	2.5 / 2.5
Izod impact strength		ISO 180/1U	kJ/m ²	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	70
Vicat softening temperature	50°C/h - 50N	ISO 306	°C	200

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+013
Comparative tracking index	Solution A	IEC 60112	V	600
CTI performance level category		Sol A		PLC 0

Burning behaviour

Flammability, 0.75 mm	0.75 mm	UL 94		V2
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	750 - 850
Glow-wire flammability index, GWFI, 3.0 mm	3.0 mm	IEC 60695-2-12	°C	750 - 850
Glow-wire flammability index, GWFI	1-3 mm	IEC 60695-2-12	°C	750 - 850
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100

*: 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 - 270 °C
Recommended mould temperature	60 - 80 °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.

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