

TECHNICAL DATA SHEET

TECHNYL C 219L1 NC XB

DOMAMID 6H1UV1 NCXB

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

General

Polymer type	PA6		
Certifications	RoHS	EC 1907/2006 (REACH)	
Feature	UV stabilized	organic heat stabilized	
Colors available	natural		
Forms	pellets		
Processing technology	injection moulding		

Product identification

ISO 1043 abbreviation	PA6		
ISO 16396 designation	PA6,MHL1,S14-030		

Condition	Standard	Unit	Value
-----------	----------	------	-------

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm ³	1.14
Humidity absorption	T=23°C, 50% RH	ISO 62	%	3.3 - 3.4
Water absorption	24 hr, 23°C	ISO 62	%	1.9 - 2.0
Water absorption, saturation			%	9.1
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.9 - 1.1
Molding shrinkage, normal		ISO 294-4, 2577	%	1.0 - 1.2
Melt volume-flow rate, MVR, 5.0 kg	275°C, 5kg	ISO 1133	cm ³ /10 min	165.0
Viscosity number	96% H2SO4	ISO 307	cm ³ /g	145.0

	Condition	Standard	Unit	Value
Mechanical properties				dam / cond.*
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3200 / 1000
Strain at break	50 mm/min	ISO 527-1/-2	%	40 / 50
Yield stress	50 mm/min	ISO 527-1/-2	MPa	80 / 40
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	kJ/m ²	NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	4.5 / 20
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	NB
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	4.5 / 19
Rockwell hardness		ISO 2039/2	ScaleR	120 / -

*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
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

Condition	Standard	Unit	Value
-----------	----------	------	-------

Burning behaviour

Condition	Standard	Unit	Value
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
Glow-wire flammability index, GWFI, 3.0 mm			°C 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 mm/min

Condition	Standard	Unit	Value
-----------	----------	------	-------

Electrical properties

Condition	Standard	Unit	Value
Volume resistivity		IEC 62631-3-1	ohm.m 1.0E13
Surface resistivity		IEC 62631-3-1	ohm 1.0E13
Comparative tracking index	Solution A	IEC 60112	V 600.0
CTI performance level category		Sol A	PLC 0

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

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.