

TECHNICAL DATA SHEET

TECHNYL SHAPE C 406P3 NC

(Previously DOMAMID 6HVPS3 NC01)

Polyamide 6, plasticized, high viscosity, for extrusion

General

Feature	High viscosity	Plasticized
Polymer type	PA6 (Polyamide 6)	
Processing technology	Extrusion	
Certification	RoHS	EC 1907/2006 (REACH)
Colors available	Natural	
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA6-P
ISO 16396 designation	PA6-P,E,S27-007

Condition	Standard	Unit	Value
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Physical properties

Density		ISO 1183	g/cm ³	1.14
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.5 - 2.6
Water absorption	24 hr, 23°C	ISO 62	%	1.8 - 1.9
Water absorption, saturation			%	8.5
Molding shrinkage, parallel		ISO 294-4, 2577	%	1.35 - 1.5
Molding shrinkage, normal		ISO 294-4, 2577	%	1.45 - 1.65
Melt flow rate, MFR	235°C/2,16 kg	ISO 1133	g/10 min	7.5
Viscosity number	96% H ₂ SO ₄	ISO 307	cm ³ /g	245

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	Condition	Standard	Unit	Value dam / cond.*
Mechanical properties				
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	700 / 400
Stress at break		ISO 527-1/-2	MPa	55 / 45
Strain at break	50 mm/min	ISO 527-1/-2	%	200 / 200
Yield stress	50 mm/min	ISO 527-1/-2	MPa	50 / 50
Yield strain		ISO 527-1/-2	%	200 / 200
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	600 / 550
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	30 / 25
Charpy impact strength, +23°C	+23°C	ISO 179/1eU		NB / NB
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	100 / -
Charpy impact strength, -40°C	-40°C	ISO 179/1eU	kJ/m²	130 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	40 / NB
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m²	2 / -
Charpy notched impact strength, -40°C	-40°C	ISO 179/1eA	kJ/m²	3.5 / -
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	NB / -
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	35 / NB

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	138
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	53

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+013
Surface resistivity		IEC 62631-3-1	ohm	1E+013

Burning behaviour

Flammability, 0.75 mm	0.75 mm	UL 94		HB
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

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Processing conditions

Drying temperature/time	3hrs max at 70°C with dry air, dew point -35°C
Suggested max moisture	0.08 %
Feed zone temperature for extrusion	225 - 245 °C
Compression zone temperature for extrusion	220 - 240 °C
Front zone temperature for extrusion	215 - 235 °C
Die zone temperature for extrusion	200 - 220 °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 -35°C.

Disclaimer

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