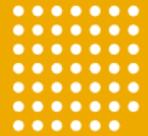


TECHNICAL DATA SHEET

**TECHNYL SHAPE A 402H1 NC**

**TECHNYL A 402H1 NATURAL**



TECHNYL SHAPE A 402H1 NC is an unreinforced polyamide 66, very high viscosity, heat stabilized, for extrusion and injection moulding. This grade offers three main advantages: high impact resistance at low humidity levels, good rigidity, and excellent compression resistance.

**General**

Polymer type	PA66	
Certifications	RoHS	EC 1907/2006 (REACH)
Feature	high viscosity	high impact resistant
Applications	consumer applications sport	industrial applications
Colors available	natural	
Forms	pellets	
Processing technology	extrusion	

**Product identification**

ISO 1043 abbreviation	PA66
ISO 16396 designation	PA66,ME,S27-030

Condition	Standard	Unit	Value
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**Physical properties**

Condition	Standard	Unit	Value	
Density	ISO 1183	g/cm <sup>3</sup>	1.14	
Humidity absorption	T=23°C, 50% RH	ISO 62	%	2.5 - 2.6
Water absorption	24 hr, 23°C	ISO 62	%	1.5
Molding shrinkage, parallel	ISO 294-4, 2577	%	1.6 - 1.8	
Molding shrinkage, normal	ISO 294-4, 2577	%	1.6 - 1.8	

	Condition	Standard	Unit	Value
<b>Mechanical properties</b>				<b>dam / cond.*</b>
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	3100 / 1300
Stress at break		ISO 527-1/-2	MPa	55 / 25
Strain at break		ISO 527-1/-2	%	35 / 150
Yield stress		ISO 527-1/-2	MPa	85 / 50
Yield strain		ISO 527-1/-2	%	4 / 50
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	2800 / 1200
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	120 / 75
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m <sup>2</sup>	NB
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m <sup>2</sup>	NB
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	6 / 30
Charpy notched impact strength, -30°C	-30°C	ISO 179/1eA	kJ/m <sup>2</sup>	5 / 4.5
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	6 / 30

\*: **conditioned according to ISO 1110**

	Condition	Standard	Unit	Value
<b>Thermal properties</b>				
Melting temperature, 10°C/min		ISO 11357-1	°C	260
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	180
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	65
Thermal conductivity, through plane		ASTM E1461	W/m.K	0.25

	Condition	Standard	Unit	Value
<b>Burning behaviour</b>				
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		<100 mm/min

Condition	Standard	Unit	Value
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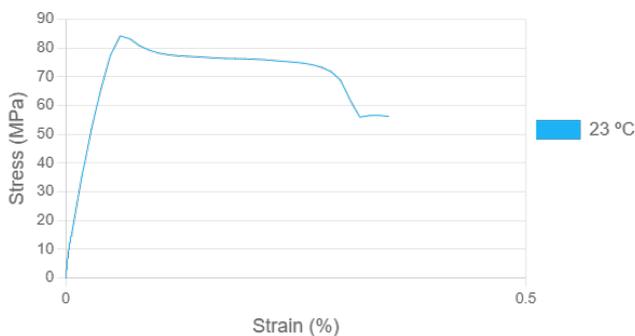
**Electrical properties**

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	475.0
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	22.0

**Processing conditions**

Drying temperature/time	8H at 80°C with dry air, dew point -35°C
Suggested max moisture	0.08 %
Feed zone temperature for extrusion	260 - 270 °C
Compression zone temperature for extrusion	275 - 290 °C
Front zone temperature for extrusion	275 - 290 °C
Die zone temperature for extrusion	265 - 285 °C
Recommended extrusion temperature	260 - 290 °C

**Stress-strain, dry**  
Temperature (°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.