TECHNYL STAR®
High-flow PA6 & PA66

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL STAR S 218 MT40 NC

TECHNYL STAR S 218 MT40 NC is based on a patented high flow polyamide 6 resin (TechnylStar), reinforced with 40% mineral filler, heat stabilized, for injection moulding. This grade offers good mechanical properties and is characterized by a high fluidity of the melt.

General

Certifications	RoHS	EC 1907/2006 (REACH)
Polymer type	PA6	
Feature	heat-aging stabilized excellent surface finish low warpage	improved flowability high dimensional stability very high flow
Applications	automotive applications	handles
Colors available	natural	
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6-MD40
ISO 16396 designation	PA6,MD40,MH,S12-80

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.45
Water absorption	24 hr, 23°C	ISO 62	%	0.7
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.6
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	6000 / 2400
Stress at break		ISO 527-1/-2	MPa	90 / 55
Strain at break		ISO 527-1/-2	%	8 / 34
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	5500 / 1850
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	150 / 65
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	120 / 100
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	5 / 9
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	100 / 200
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	5 / 8

: conditioned according to ISO 1110

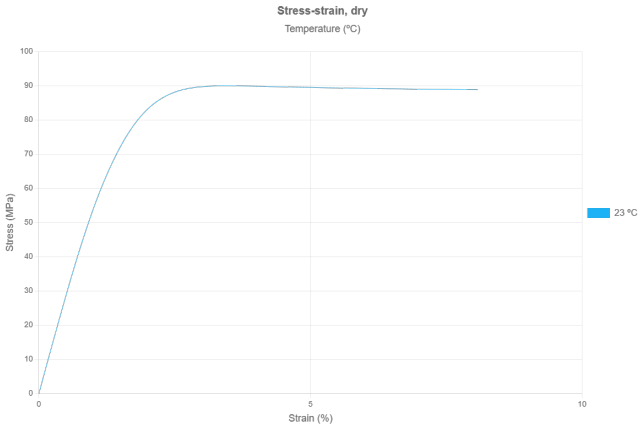
	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	221
Temp. of deflection under load, 0.45 MPa	0.45 MPa	ISO 75	°C	186
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	90

	Condition	Standard	Unit	Value
Burning behaviour				
Flammability, 0.75 mm	0.75 mm	UL 94		HB
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Flammability, 3.0 mm	3.0 mm	UL 94		HB
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

Processing conditions	
Drying temperature/time	80 °C
Suggested max moisture	0.2 %

Processing conditions

Rear temperature	230 - 235 °C
Middle temperature	235 - 245 °C
Front temperature	245 - 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 reinforced polyamides, Domo recommends the use of steel with a high content of carbon, and purified for polishing, to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (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.