

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**

Feature	Heat-aging stabilized Excellent surface finish	High dimensional stability Low warpage
Polymer type	PA6 (Polyamide 6)	
Processing technology	Injection molding	
Certification	RoHS	EC 1907/2006 (REACH)
Applications	Automotive Applications	Handles
Colors available	Natural	
Forms	Pellets	

**Product identification**

ISO 1043 abbreviation	PA6-MD40
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Condition	Standard	Unit	Value
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**Physical properties**

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm <sup>3</sup>	1.45
Water absorption	24 hr, 23°C	ISO 62	%	0.72
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.6
Molding shrinkage, normal		ISO 294-4, 2577	%	0.9

**Mechanical properties**

dam / cond.\*

	Condition	Standard	Unit	Value
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/m <sup>2</sup>	120 / 100
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m <sup>2</sup>	5 / 9
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m <sup>2</sup>	100 / 200
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m <sup>2</sup>	5 / 8

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**Thermal properties**

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

**Burning behaviour**

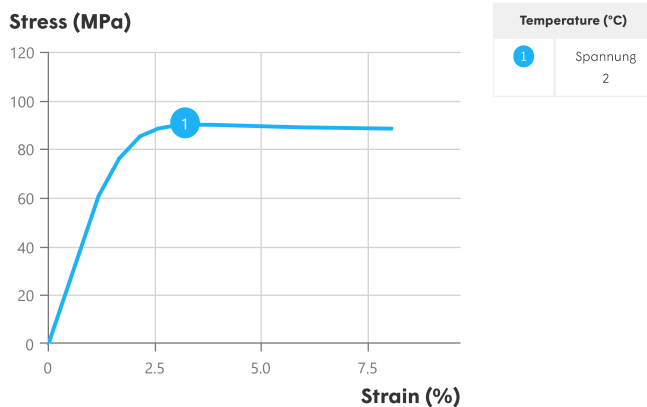
Flammability, 0.75 mm	0.75 mm	UL 94	HB
Flammability, 1.5 mm	1.5 mm	UL 94	HB
Flammability, 3.0 mm	3.0 mm	UL 94	HB

\*: conditioned according to ISO 1110

**Processing conditions**

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	230 - 235 °C
Middle temperature	235 - 245 °C
Front temperature	245 - 250 °C
Recommended mould temperature	60 - 90 °C

**Stress-strain, dry**



**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.

### Disclaimer

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