TECHNYL STAR®
High-flow PA6 & PA66

DOMO
caring is our formula

TECHNICAL DATA SHEET

TECHNYL STAR S 216 V30 NC

TECHNYL STAR S 216 V30 NC is based on a patented high flow polyamide 6 resin (TechnylStar), reinforced with 30% of glass fibre, for injection moulding. Due to its outstanding flow caracteristics, this grade provides a significant productivity improvement and allows more freedom in mould and part design versus a standard polyamide solutions.

General

Certifications	RoHS EC 1907/2006 (REACH)	UL listed product
Polymer type	PA6	
Feature	improved flowability very high flow	excellent surface finish
Applications	consumer applications general purpose outdoor applications	home & office furniture industrial applications power tool / garden equipment
Colors available	black	natural
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA6-GF30
ISO 16396 designation	PA6,GF30,M,S12-100

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.34
Water absorption	24 hr, 23°C	ISO 62	%	0.9 - 1.0
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.2
Molding shrinkage, normal		ISO 294-4, 2577	%	0.75

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	9600 / 6200
Stress at break		ISO 527-1/-2	MPa	180 / 110
Strain at break		ISO 527-1/-2	%	3.3 / -
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	9300 / 5200
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	255 / -
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	81 / 90
Charpy impact strength, -30°C	-30°C	ISO 179/1eU	kJ/m²	50 / -
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	10 / 14
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	82 / 65
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	12 / 19

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	222
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	204

	Condition	Standard	Unit	Value
Burning behaviour				
UL Yellow Card availability 1	**Click here to have access to the UL Yellow Card availability 1 -> QMFZ2.E44716**			
Flammability, 1.5 mm	1.5 mm	UL 94		HB
Flammability, 3.0 mm	3.0 mm	UL 94		HB
Glow-wire flammability index, GWFI, 1.5 mm	1.5 mm	IEC 60695-2-12	°C	650
Oxygen index			%	22.0
Burning rate, FMVSS, Thickness 1 mm		FMVSS 302		< 100 mm/min

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	Condition	Standard	Unit	Value
Electrical properties				
Volume resistivity		IEC 62631-3-1	ohm.m	1.0E13
Surface resistivity		IEC 62631-3-1	ohm	1.0E14
Comparative tracking index	Solution A	IEC 60112	V	550.0
CTI performance level category		Sol A		PLC 1

Processing conditions

Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	230 - 235 °C
Middle temperature	235 - 240 °C
Front temperature	240 - 245 °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.