TECHNYL STAR®
High-flow PA6 & PA66

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TECHNICAL DATA SHEET

TECHNYL STAR AFX 218 V60 BK 31N

TECHNYL STAR AFX 218 V60 BK 31N is a high flow polyamide 66 resin, reinforced with 60% of glass fibre, heat stabilized, for injection moulding. Due to its outstanding flow caracteristics, this grade shows exceptional processing behaviour and excellent surface aspect of the finished part.

General

Polymer type	PA66	
Certifications	RoHS EC 1907/2006 (REACH)	UL listed product
Feature	heat-aging stabilized high dimensional stability very high flow	excellent surface finish high stiffness
Applications	automotive applications handles	consumer applications industrial applications
Colors available	black	natural
Forms	pellets	
Processing technology	injection moulding	

Product identification

ISO 1043 abbreviation	PA66-GF60

Physical properties

	Condition	Standard	Unit	Value
Density		ISO 1183	g/cm³	1.69
Water absorption	24 hr, 23°C	ISO 62	%	0.6
Molding shrinkage, parallel		ISO 294-4, 2577	%	0.35
Molding shrinkage, normal		ISO 294-4, 2577	%	0.6

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	Condition	Standard	Unit	Value
Mechanical properties				**dam / cond.***
Tensile modulus	1 mm/min	ISO 527-1/-2	MPa	22000 / 16500
Stress at break		ISO 527-1/-2	MPa	270 / 195
Strain at break		ISO 527-1/-2	%	2.1 / 3.1
Flexural modulus, ISO 178	2 mm/min	ISO 178	MPa	20000 / 15000
Flexural strength, ISO 178	2 mm/min	ISO 178	MPa	410 / 300
Charpy impact strength, +23°C	+23°C	ISO 179/1eU	kJ/m²	95 / 90
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m²	17 / 18
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m²	94 / 92
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m²	17 / 20

: conditioned according to ISO 1110

	Condition	Standard	Unit	Value
Thermal properties				
Melting temperature, 10°C/min		ISO 11357-1	°C	262
Temp. of deflection under load, 1.80 MPa	1.80 MPa	ISO 75	°C	255

	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**			
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	1.0E12
Surface resistivity		IEC 62631-3-1	ohm	1.0E13
Comparative tracking index	Solution A	IEC 60112	V	550.0
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	40.0

Processing conditions	
Drying temperature/time	80 °C
Suggested max moisture	0.2 %
Rear temperature	265 - 275 °C
Middle temperature	270 - 280 °C
Front temperature	280 - 290 °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.