

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 characteristics, this grade shows exceptional processing behaviour and excellent surface aspect of the finished part.

General

Feature	Heat-aging stabilized Very high flow High stiffness	High dimensional stability Excellent surface finish
Polymer type	PA66 (Polyamide 66)	
Processing technology	Injection molding	
Certification	RoHS EC 1907/2006 (REACH)	UL-Yellow Card
Applications	Automotive Applications Handles	Consumer good application Industrial Applications
Colors available	Black	Natural
Forms	Pellets	

Product identification

ISO 1043 abbreviation	PA66-GF60
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	Condition	Standard	Unit	Value
Physical properties				
Density		ISO 1183	g/cm ³	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/m ²	95 / 90
Charpy notched impact strength, +23°C	+23°C	ISO 179/1eA	kJ/m ²	17 / 18
Izod impact strength, +23°C	+23°C	ISO 180/1U	kJ/m ²	94 / 92
Izod notched impact strength, +23°C	+23°C	ISO 180/1A	kJ/m ²	17 / 20


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

Electrical properties

Volume resistivity		IEC 62631-3-1	ohm.m	1E+012
Surface resistivity		IEC 62631-3-1	ohm	1E+013
Comparative tracking index	Solution A	IEC 60112	V	550
CTI performance level category		Sol A		PLC 1
Dielectric strength	1 mm	IEC 60243-1	kV/mm	40

Burning behaviour

UL Yellow Card availability 	Click here to have access to the UL Yellow Card → QMFZ2.E44716
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*: conditioned according to ISO 1110

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.

Disclaimer

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