

TECHNYL STAR® AF 218 V40 BK 21N

DOMO Engineering Plastics - Polyamide 66

General Information

Product Description

TECHNYL STAR AF 218 V40 BK 21N is a polyamide 6.6, high flow, reinforced with 40% of glass fiber, 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. This grade is ideal for use in the automotive industry for engine components. This grade is ideal for Mucell® injection moulding technology.

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight
Additive	• Heat Stabilizer
Features	• Heat Aging Resistant • High Flow • Heat Stabilized • Outstanding Surface Finish
Uses	• Automotive Applications • General Purpose • Pulleys
Agency Ratings	• EC 1907/2006 (REACH)
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding
ISO Designation (ISO 16396)	• PA66,GF40,MH,S14-140
Resin ID (ISO 1043)	• PA66-GF40

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.46	--	g/cm ³	ISO 1183
Water Absorption (24 hr, 73°F)	0.60 to 0.70	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1.74E+6	1.04E+6	psi	ISO 527-1
Tensile Stress (Break)	31900	20300	psi	ISO 527-2
Tensile Strain (Break)	2.5	3.5	%	ISO 527-2
Flexural Modulus	1.57E+6	1.10E+6	psi	ISO 178
Flexural Stress	44200	33400	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (73°F)	6.7	8.6	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	44	45	ft·lb/in ²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	6.7	8.6	ft·lb/in ²	ISO 180/1A
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	491	--	°F	ISO 75-2/A
Melting Temperature ²	505	--	°F	ISO 11357-3
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate (0.0394 in)	< 3.9	--	in/min	FMVSS 302
Flame Rating (0.030 in)	HB	--		UL 94

Processing Information

Injection	Dry Unit
Drying Temperature	176 °F
Suggested Max Moisture	0.20 %
Rear Temperature	509 to 527 °F
Middle Temperature	518 to 536 °F
Front Temperature	536 to 554 °F



Mold Temperature	140 to 194 °F
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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.

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min

