

TECHNYL STAR® AFX 218 V50 BK 31N

DOMO Engineering Plastics - Polyamide 66

General Information

Product Description

TECHNYL STAR AFX 218 V50 BK 31N is a high flow polyamide 66 resin, reinforced with 50% 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

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Heat Aging Resistant	• High Dimensional Stability	• High Stiffness
	• Heat Stabilized	• High Flow	• Outstanding Surface Finish
Uses	• Automotive Applications	• Gears	
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PA66-GF50		

Properties ¹

Physical	Dry	Conditioned	Unit	Test Method
Density	1.55	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.65	--	%	
Flow	0.30	--	%	
Water Absorption (24 hr, 73°F)	0.60	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	2.47E+6	1.81E+6	psi	ISO 527-1
Tensile Stress (Break)	37000	26100	psi	ISO 527-2
Tensile Strain (Break)	2.5	3.5	%	ISO 527-2
Flexural Modulus	2.03E+6	--	psi	ISO 178
Flexural Stress	55100	--	psi	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (73°F)	7.1	10	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	48	48	ft·lb/in ²	ISO 179/1eU
Notched Izod Impact Strength (73°F)	8.1	10	ft·lb/in ²	ISO 180/1A
Unnotched Izod Impact Strength (73°F)	42	43	ft·lb/in ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	493	--	°F	ISO 75-2/A
Melting Temperature ²	504	--	°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
Glow Wire Flammability Index (0.030 in)	1200	--	°F	IEC 60695-2-12
Glow Wire Ignition Temperature (0.030 in)	1250	--	°F	IEC 60695-2-13

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

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

