

TECHNYL STAR® AFX 216 V60 GREY 2327

Polyamide 66
Solvay Engineering Plastics

Message:

TECHNYL STAR® AFX 216 V60 Grey 2327 is a high flow polyamide 66 resin, reinforced with 60% of glass fibre, for injection moulding. Due to its outstanding flow characteristics, this grade shows exceptional processing behaviour and excellent surface aspect of the finished part.

General Information				
UL YellowCard		E44716-101114082		
Filler / Reinforcement		Glass fiber reinforced material, 60% filler by weight		
Features		Good dimensional stability		
		Excellent appearance		
		Rigidity, high		
		High liquidity		
Uses		Gear		
		Large household appliances and small household appliances		
Agency Ratings		UL QMFZ2		
Appearance		Grey		
Forms		Particle		
Processing Method		Injection molding		
Multi-Point Data		Isothermal Stress vs. Strain (ISO 11403-1)		
Resin ID (ISO 1043)		PA66-GF60		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.69	--	g/cm ³	ISO 1183/A
Water Absorption (23°C, 24 hr)	0.52	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
23°C	19600	--	MPa	ASTM D638
23°C	22000	16500	MPa	ISO 527-2/1A
Tensile Strength				
Fracture, 23°C	250	--	MPa	ASTM D638
Fracture, 23°C	260	195	MPa	ISO 527-2/1A
Tensile Elongation				
Yield, 23°C	2.0	--	%	ASTM D638
Fracture, 23°C	2.0	--	%	ASTM D638
Fracture, 23°C	2.2	2.9	%	ISO 527-2
Flexural Modulus				
23°C	18000	--	MPa	ASTM D790

23°C	18000	13200	MPa	ISO 178
Flexural Strength				
23°C	370	--	MPa	ASTM D790
23°C	400	300	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	15	15	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	90	87	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	170	--	J/m	ASTM D256
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
1.8 MPa, not annealed	253	--	°C	ASTM D648
1.8 MPa, not annealed	245	--	°C	ISO 75-2/Af
Melting Temperature	262	--	°C	ISO 11357-3
Flammability	Dry	Conditioned		Test Method
Flame Rating				UL 94
0.8 mm	HB	--		UL 94
1.6 mm	HB	--		UL 94
3.2 mm	HB	--		UL 94
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	265 - 275		°C	
Middle Temperature	270 - 280		°C	
Front Temperature	280 - 290		°C	
Mold Temperature	60 - 90		°C	
Injection instructions				

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 mini -20°C. Recommended time 2-4h

Injection Advice:

For reinforced polyamide, Solvay 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). For Mould Temperature, in the case of parts where the surface roughness is required we can recommend a temperature of 90°C to 120°C with an optimum at 105°C.

The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design

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