

TECHNYL® C 216 V45 BLACK 34N

Polyamide 6
Solvay Engineering Plastics

Message:

TECHNYL® C 216 V45 Black 34N is a polyamide 6, reinforced with 45% of glass fibre, for injection moulding. This grade has been optimized to have good impact strength, a nice surface aspect and being easy to paint.

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 45% filler by weight		
Features		Good dimensional stability		
		Rigidity, high		
		Good demoulding performance		
Uses		Sporting goods		
		Consumer goods application field		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS compliance		
Appearance		Black		
		Natural color		
Forms		Particle		
Processing Method		Injection molding		
Multi-Point Data		Isothermal Stress vs. Strain (ISO 11403-1)		
Resin ID (ISO 1043)		PA6-GF45		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.51	--	g/cm ³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	0.80	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.8	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	14500	9300	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	210	135	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	3.0	6.0	%	ISO 527-2
Flexural Modulus (23°C)	13500	8000	MPa	ISO 178
Flexural Stress (23°C)	340	170	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	13	20	kJ/m ²	ISO 179/1eA

Charpy Unnotched Impact Strength (23°C)	90	100	kJ/m ²	ISO 179/1eU
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	210	--	°C	ISO 75-2/Af
Melting Temperature	222	--	°C	ISO 11357-3
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	235 - 240		°C	
Middle Temperature	240 - 250		°C	
Front Temperature	250 - 260		°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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