

TECHNYL® C 216 V15 NATURAL

Polyamide 6
Solvay Engineering Plastics

Message:

TECHNYL® C 216 V15 Natural is a polyamide 6, reinforced with 15% of glass fiber, for injection moulding. This grade has good mechanical properties and offering an excellent combination between thermal and mechanical properties.

General Information				
UL YellowCard		E44716-235520		
Filler / Reinforcement		Glass fiber reinforced material, 15% filler by weight		
Features		Good liquidity		
		Good demoulding performance		
Uses		Large household appliances and small household appliances		
Agency Ratings		UL QMFZ2		
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-GF15		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.23	--	g/cm ³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	1.2	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.6	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	6100	2900	MPa	ISO 527-2/1A
Tensile Strength				
Yield, 23°C	119	--	MPa	ASTM D638
Fracture, 23°C	120	70.0	MPa	ISO 527-2/1A
Tensile Elongation				
Fracture, 23°C	2.5	--	%	ASTM D638
Fracture, 23°C	4.0	7.0	%	ISO 527-2
Flexural Modulus				
23°C	5600	--	MPa	ASTM D790
23°C	6000	--	MPa	ISO 178
Flexural Strength				

23°C	184	--	MPa	ASTM D790
23°C	115	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.5	16	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	42	58	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	5.0	14	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	180	--	°C	ISO 75-2/Af
Melting Temperature	222	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+13	1.0E+11	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+11	ohms · cm	IEC 60093
Dielectric Strength (2.00 mm)	--	22	kV/mm	IEC 60243-1
Dissipation Factor	0.020	0.090		IEC 60250
Comparative Tracking Index (Solution A)	550	475	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (0.8 mm)	HB	--		UL 94
Glow Wire Flammability Index (1.6 mm)	650	--	°C	IEC 60695-2-12
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	230 - 235		°C	
Middle Temperature	235 - 240		°C	
Front Temperature	240 - 250		°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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