

TECHNYL® A 216 V20 BLACK 21N

Polyamide 66
Solvay Engineering Plastics

Message:

TECHNYL® A 216 V20 Black 21N is a polyamide 66, reinforced with 20% of glass fibre, for injection moulding. This grade offers an excellent combination between thermal and mechanical properties.

General Information				
UL YellowCard		E44716-235560		
Filler / Reinforcement		Glass fiber reinforced material, 20% filler by weight		
Features		Good dimensional stability		
		Good liquidity		
		Good demoulding performance		
Uses		Electrical/Electronic Applications		
Agency Ratings		EC 1907/2006 (REACH)		
		UL QMFZ2		
RoHS Compliance		RoHS compliance		
Appearance		Black		
		Grey		
		Blue		
		Natural color		
Forms		Particle		
Processing Method		Injection molding		
Multi-Point Data		Isothermal Stress vs. Strain (ISO 11403-1)		
Resin ID (ISO 1043)		PA66-GF20		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.28	--	g/cm ³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	1.0	--	%	ISO 62
Saturated, 23°C	6.6	--	%	ISO 62
Equilibrium, 23°C, 50% RH	2.5	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	7400	5000	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	145	100	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	3.0	15	%	ISO 527-2
Flexural Modulus (23°C)	6800	4500	MPa	ISO 178
Flexural Stress (23°C)	225	150	MPa	ISO 178

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	7.0	9.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				
23°C	50	80	kJ/m ²	ISO 179/1eU
23°C	40	--	kJ/m ²	ISO 179/1fU
Notched Izod Impact (23°C)	7.0	9.0	kJ/m ²	ISO 180
Unnotched Izod Impact Strength (23°C)	45	65	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	245	--	°C	ISO 75-2/Af
Melting Temperature	262	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	6.0E+15	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+15	2.0E+15	ohms · cm	IEC 60093
Dielectric Strength (2.00 mm)	32	28	kV/mm	IEC 60243-1
Relative Permittivity	3.70	4.00		IEC 60250
Dissipation Factor	0.010	0.11		IEC 60250
Comparative Tracking Index				IEC 60112
Solution a	600	600	V	IEC 60112
Solution B	525	525	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.6 mm)	HB	--		UL 94
Glow Wire Flammability Index (1.6 mm)	650	--	°C	IEC 60695-2-12
Oxygen Index	23	--	%	ISO 4589-2
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	270 - 280		°C	
Middle Temperature	275 - 285		°C	
Front Temperature	280 - 290		°C	
Mold Temperature	70 - 100		°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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