

TECHNYL® A 118 V50 BLACK 21

Polyamide 66
Solvay Engineering Plastics

Message:

TECHNYL® A 118 V50 Black 21 is a polyamide 66, reinforced with 50% of glass fibre, heat stabilized and modified viscosity, for injection moulding. This grade offers excellent combination between thermal and mechanical properties. It has a high fluency that permits the injection mould of big dimension or complex geometric structures, an excellent dimensional stability and chemical stability.

General Information				
Filler / Reinforcement	Glass fiber reinforced material, 50% filler by weight			
Additive	heat stabilizer			
Features	Heat Stabilized - Inorganic			
	Rigidity, high			
	Good liquidity			
	Good demoulding performance			
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)	PA66-GF50			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.55	--	g/cm ³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	0.60	--	%	ISO 62
Saturated, 23°C	3.6	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.4	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	17000	13600	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	215	155	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	2.2	3.2	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	14	15	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength				
23°C	80	75	kJ/m ²	ISO 179/1eU
23°C	90	--	kJ/m ²	ISO 179/1fU

Notched Izod Impact (23°C)	14	16	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	250	--	°C	ISO 75-2/Af
Melting Temperature	261	--	°C	ISO 11357-3
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	270 - 280		°C	
Middle Temperature	280 - 290		°C	
Front Temperature	280 - 300		°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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