

TECHNYL® AR 218 V50 BLACK

Polyamide 66
Solvay Engineering Plastics

Message:

TECHNYL® AR 218 V50 Black is a polyamide 66, reinforced with 50% of glass fibre, heat stabilized, for injection moulding. It contains recycled materials. This grade offers a good combination between thermal and mechanical properties.

General Information				
Filler / Reinforcement		Glass fiber reinforced material, 50% filler by weight		
Additive		heat stabilizer		
Features		Heat Stabilized - Inorganic		
		Rigidity, high		
Uses		Electrical appliances		
		General		
Agency Ratings		EC 1907/2006 (REACH)		
RoHS Compliance		RoHS compliance		
Appearance		Black		
Forms		Particle		
Processing Method		Injection molding		
Resin ID (ISO 1043)		PA66-GF50		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.56	--	g/cm ³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	0.70	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.4	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	15000	11000	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	220	--	MPa	ISO 527-2/1A
Fracture, 23°C	205	140	MPa	ISO 527-2/1A
Tensile Strain				ISO 527-2
Yield, 23°C	2.3	--	%	ISO 527-2
Fracture, 23°C	2.0	4.0	%	ISO 527-2
Flexural Modulus (23°C)	14500	--	MPa	ISO 178
Flexural Stress (23°C)	330	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	13	14	kJ/m ²	ISO 179/1eA

Charpy Unnotched Impact Strength (23°C)	70	80	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	18	--	kJ/m ²	ISO 180
Unnotched Izod Impact Strength (23°C)	70	--	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	260	--	°C	ISO 75-2/Bf
1.8 MPa, not annealed	250	--	°C	ISO 75-2/Af
Melting Temperature	262	--	°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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