

TECHNYL® A 218 V30 BLACK 21NS

Polyamide 66
Solvay Engineering Plastics

Message:

TECHNYL® A 218 V30 Black 21NS is a polyamide 66, reinforced with 30% of glass fibre, heat stabilized, for injection moulding.

General Information				
UL YellowCard		E44716-235569	E44716-235570	
Filler / Reinforcement		Glass fiber reinforced material, 30% filler by weight		
Additive		heat stabilizer		
Features		Heat Stabilized - Inorganic		
		Good liquidity		
		Good demoulding performance		
Uses		Application in Automobile Field		
Agency Ratings		EC 1907/2006 (REACH)		
		EN 45545		
		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)		PA66-GF30		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.36	--	g/cm³	ISO 1183/A
Water Absorption				ISO 62
23°C, 24 hr	0.80	--	%	ISO 62
Equilibrium, 23°C, 50% RH	1.7	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	10000	7500	MPa	ISO 527-2/1A
Tensile Stress (Break, 23°C)	190	135	MPa	ISO 527-2/1A
Tensile Strain (Break, 23°C)	3.0	7.0	%	ISO 527-2
Flexural Modulus				
23°C	9000	--	MPa	ASTM D790
23°C	9000	6400	MPa	ISO 178

Flexural Strength				
23°C	290	--	MPa	ASTM D790
23°C	280	185	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	11	15	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	75	88	kJ/m ²	ISO 179/1eU
Notched Izod Impact				
23°C	120	--	J/m	ASTM D256
23°C	10	18	kJ/m ²	ISO 180
Unnotched Izod Impact Strength (23°C)	60	65	kJ/m ²	ISO 180/1U
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
	260			
0.45 MPa, not annealed	260	--	°C	ISO 75-2/Bf
1.8 MPa, not annealed	255	--	°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	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength (2.00 mm)	34	29	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	500	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.6 mm	HB	--		UL 94
3.2 mm	HB	--		UL 94
Glow Wire Flammability Index (1.6 mm)	700	--	°C	IEC 60695-2-12
Oxygen Index	23	--	%	ISO 4589-2
Additional Information	Dry	Conditioned		Test Method
European Railways Certifications				EN 45545-2
R22	NC	--		EN 45545-2
R23	NC	--		EN 45545-2
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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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

