

TECHNYL® A 238 BLACK 21N

Polyamide 66
Solvay Engineering Plastics

Message:
TECHNYL® A 238 Black 21N is an unfilled polyamide 6.6, heat stabilized, impact modified, for injection moulding. This grade offers excellent combination between rigidity and impact resistance at ambient temperature.

General Information				
Additive		Impact modifier heat stabilizer		
Features		Heat Stabilized - Inorganic Impact resistance, high Good demoulding performance		
Uses		Industrial application Connector Application in Automobile Field Sporting goods Consumer goods application field		
Agency Ratings		EC 1907/2006 (REACH)		
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		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.10	--	g/cm ³	ISO 1183/A
Water Absorption (23°C, 24 hr)	1.1	--	%	ISO 62
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	2550	1400	MPa	ISO 527-2/1A
Tensile Stress				ISO 527-2/1A
Yield, 23°C	70.0	40.0	MPa	ISO 527-2/1A
Fracture, 23°C	50.0	40.0	MPa	ISO 527-2/1A
Tensile Strain				ISO 527-2
Yield, 23°C	5.0	15	%	ISO 527-2

Fracture, 23°C	30	--	%	ISO 527-2
Flexural Modulus (23°C)	2250	1200	MPa	ISO 178
Flexural Stress (23°C)	95.0	47.0	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength (23°C)	8.0	20	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	No Break	No Break		ISO 179/1eU
Notched Izod Impact (23°C)	8.0	16	kJ/m ²	ISO 180
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, not annealed	180	--	°C	ISO 75-2/Bf
1.8 MPa, not annealed	70.0	--	°C	ISO 75-2/Af
Melting Temperature	263	--	°C	ISO 11357-3
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+14	1.0E+13	ohms	IEC 60093
Volume Resistivity	1.0E+15	1.0E+12	ohms · cm	IEC 60093
Dielectric Strength (2.00 mm)	32	32	kV/mm	IEC 60243-1
Relative Permittivity	3.20	3.80		IEC 60250
Dissipation Factor	0.020	0.040		IEC 60250
Comparative Tracking Index				IEC 60112
Solution a	500	600	V	IEC 60112
Solution B	450	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating (1.6 mm)	HB	--		UL 94
Oxygen Index	21	--	%	ISO 4589-2
Injection	Dry	Unit		
Drying Temperature	80		°C	
Suggested Max Moisture	0.20		%	
Rear Temperature	265 - 275		°C	
Middle Temperature	270 - 280		°C	
Front Temperature	280 - 285		°C	
Mold Temperature	60 - 80		°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 unfilled polyamide, Solvay recommends the use of high alloy steel with a weak chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (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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