

TORZEN® G5000HSL BK20

Polyamide 66

INVISTA Engineering Polymers

Message:

TORZEN® G5000HSL BK20 is a 50% glass reinforced, heat stabilized, black, PA66 resin suitable for many injection molding applications where high tensile strength and dimensional stability are needed.

General Information			
UL YellowCard	E333734-101729709		
Filler / Reinforcement	Glass Fiber,50% Filler by Weight		
Additive	Heat Stabilizer		
Features	Good Dimensional Stability		
	Good Mold Release		
	Heat Stabilized		
	High Tensile Strength		
Agency Ratings	EC 1907/2006 (REACH)		
RoHS Compliance	RoHS Compliant		
Appearance	Black		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.57	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (280°C/5.0 kg)	2.3	g/10 min	ASTM D1238
Molding Shrinkage			ISO 294-4
Across Flow : 2.00 mm	0.80 to 0.90	%	
Flow : 2.00 mm	0.20 to 0.30	%	
Water Absorption			ISO 62
23°C, 24 hr	0.65	%	
Equilibrium, 23°C, 50% RH	1.1	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	16900	MPa	ISO 527-2
Tensile Stress (Break)	247	MPa	ISO 527-2
Tensile Strain (Break)	2.4	%	ISO 527-2
Flexural Modulus	16700	MPa	ISO 178
Flexural Stress	350	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179
-40°C	14	kJ/m²	
23°C	16	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179

-30°C	100	kJ/m ²	
23°C	130	kJ/m ²	
Notched Izod Impact Strength (23°C)	13	kJ/m ²	ISO 180
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	260	°C	ISO 75-2/B
1.8 MPa, Unannealed	255	°C	ISO 75-2/A
Melting Temperature	262	°C	ISO 11357-3
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	3.0 to 4.0	hr	
Suggested Max Moisture	0.080 to 0.18	%	
Rear Temperature	250 to 270	°C	
Middle Temperature	270 to 290	°C	
Front Temperature	270 to 290	°C	
Nozzle Temperature	270 to 290	°C	
Processing (Melt) Temp	280 to 300	°C	
Mold Temperature	50.0 to 90.0	°C	
Back Pressure	0.200 to 1.00	MPa	
Cushion	4.00 to 6.00	mm	
Vent Depth	7.0E-3 to 0.040	mm	
Screw Speed	Low rpm		

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