

TORZEN Marathon™ G5000XHL BK20

Polyamide 66
INVISTA Engineering Polymers

Message:

TORZEN Marathon™ G5000XHL BK20 is a 50% glass reinforced, heat stabilized, black, PA66 resin with a significantly improved balance of continuous heat and peak temperature property retention, along with higher flow and similar shrinkage compared to conventional PA66 resins

General Information	
Filler / Reinforcement	Glass Fiber,50% Filler by Weight
Additive	Heat Stabilizer
Features	Good Mold Release
	Heat Stabilized
	High Flow
Agency Ratings	EC 1907/2006 (REACH)
RoHS Compliance	RoHS Compliant
Appearance	Black
Processing Method	Extrusion
	Injection Molding

Physical	Nominal Value	Unit	Test Method
Density	1.57	g/cm ³	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/m ²	
23°C	16	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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