

Grilon® XE 5051 (BGZ-40 FC)

Polyamide 6
EMS-GRIVORY

Message:

Grilon® XE 5051 (BGZ-40 FC) is a Polyamide 6 (Nylon 6) material filled with 40% glass fiber. It is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America for injection molding.

Important attributes of Grilon® XE 5051 (BGZ-40 FC) are:

Flame Rated
RoHS Compliant
Good Mold Release
Impact Modified

Typical applications include:

Electrical/Electronic Applications
Appliances
Automotive
Consumer Goods
Engineering/Industrial Parts

General Information				
Filler / Reinforcement		Glass Fiber,40% Filler by Weight		
Additive		Impact Modifier		
Features		Good Flow		
		Good Mold Release		
		Impact Modified		
Uses		Appliance Components		
		Automotive Applications		
		Connectors		
		Consumer Applications		
		Electrical/Electronic Applications		
		Engineering Parts		
		Household Goods		
		Industrial Applications		
		Power/Other Tools		
		Sporting Goods		
RoHS Compliance		RoHS Compliant		
Forms		Granules		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.43	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.50	--	%	
Flow	0.10	--	%	

Water Absorption				ISO 62
Saturation, 23°C	5.0	--	%	
Equilibrium, 23°C, 50% RH	1.5	--	%	
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness	220	120	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	11000	7500	MPa	ISO 527-2
Tensile Stress (Break)	170	115	MPa	ISO 527-2
Tensile Strain (Break)	3.5	8.0	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	19	15	kJ/m ²	
23°C	25	35	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	85	80	kJ/m ²	
23°C	100	--	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
1.8 MPa, Unannealed	205	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	120	--	°C	ISO 75-2/C
Continuous Use Temperature				Internal Method
-- ¹	90.0 to 120	--	°C	
-- ²	160	--	°C	
Melting Temperature ³	222	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	2.0E-5	--	cm/cm/°C	
Transverse	6.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	--	1.0E+12	ohms	IEC 60093
Volume Resistivity	1.0E+14	1.0E+14	ohms·cm	IEC 60093
Electric Strength	41	37	kV/mm	IEC 60243-1
Comparative Tracking Index	--	550	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flammability Classification (0.800 mm)	HB	--		IEC 60695-11-10, -20
Additional Information	Dry	Conditioned		Test Method
ISO Type	PA6-HI, MHR, 12-110N, GF40	--		ISO 1874
NOTE				

1.	Long Term
2.	Short Term
3.	10°C/min

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