

Akulon® Ultraflow K-FPG8

Polyamide 6
DSM Engineering Plastics

Message:

Akulon® Ultraflow K-FPG8 is a Polyamide 6 (Nylon 6) material filled with 40% glass fiber. It is available in Europe or North America. Primary attribute of Akulon® Ultraflow K-FPG8: High Flow.

General Information				
Filler / Reinforcement		Glass Fiber,40% Filler by Weight		
Features		High Flow		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.41	--	g/cm ³	ISO 1183
Molding Shrinkage				ISO 294-4
Across Flow	0.89	--	%	
Flow	0.36	--	%	
Water Absorption				ISO 62
Saturation, 23°C	5.7	--	%	
Equilibrium, 23°C, 50% RH	1.7	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	11500	7300	MPa	ISO 527-2
Tensile Stress (Break)	175	110	MPa	ISO 527-2
Tensile Strain (Break)	3.5	7.0	%	ISO 527-2
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	13	13	kJ/m ²	
23°C	20	30	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	90	95	kJ/m ²	
23°C	90	100	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	215	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	200	--	°C	ISO 75-2/A
Melting Temperature ¹	220	--	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow	2.0E-5	--	cm/cm/°C	
Transverse	6.5E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method

Surface Resistivity	--	1.0E+14	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	1.0E+13	ohms·cm	IEC 60093
Electric Strength	25	20	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.50	14.0		
1 MHz	3.30	4.50		
Dissipation Factor				IEC 60250
100 Hz	9.0E-3	0.30		
1 MHz	0.015	0.12		
Comparative Tracking Index	--	600	V	IEC 60112
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	4.0 to 8.0		hr	
Rear Temperature	230 to 250		°C	
Middle Temperature	230 to 260		°C	
Front Temperature	230 to 260		°C	
Nozzle Temperature	250 to 280		°C	
Processing (Melt) Temp	245 to 270		°C	
Mold Temperature	40.0 to 80.0		°C	
Injection Rate	Moderate-Fast			
Back Pressure	3.00 to 10.0		MPa	
Screw Compression Ratio	2.5:1.0			
NOTE				

1. 10°C/min

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