

DSM Akulon® Ultraflow K-FPG8 PA6-I-GF40

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 40% Glass Fiber Filled

Material Notes:

Glass Reinforced, High flow

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Akulon-Ultraflow-K-FPG8-PA6-I-GF40.php

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in ³	dry; ISO 1183
Water Absorption	5.7 %	5.7 %	Sim. To ISO 62
Moisture Absorption	1.70 %	1.70 %	Sim. To ISO 62
Linear Mold Shrinkage, Flow	0.0036 cm/cm	0.0036 in/in	ISO 204-4
Linear Mold Shrinkage, Transverse	0.0089 cm/cm	0.0089 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	110 MPa	16000 psi	cond; ISO 527-1/-2
	175 MPa	25400 psi	dry; ISO 527-1/-2
Elongation at Break	3.5 %	3.5 %	dry; ISO 527-1/-2
	7.0 %	7.0 %	cond; ISO 527-1/-2
Tensile Modulus	7.31 GPa	1060 ksi	cond; ISO 527-1/-2
	11.5 GPa	1670 ksi	dry; ISO 527-1/-2
Charpy Impact Unnotched	8.99 J/cm ²	42.8 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	8.99 J/cm ²	42.8 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	9.49 J/cm ²	45.2 ft-lb/in ²	cond; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	10.0 J/cm ²	47.6 ft-lb/in ²	cond; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	dry; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Mechanical Properties	Metric	English	Comments
	1.30 J/cm ²	6.19 ft-lb/in ²	cond; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	2.00 J/cm ²	9.52 ft-lb/in ²	dry; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	3.00 J/cm ²	14.3 ft-lb/in ²	cond; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 µm/m-°C	11.1 µin/in-°F	dry; ISO 11359-1/-2
CTE, linear, Transverse to Flow	65.0 µm/m-°C	36.1 µin/in-°F	dry; ISO 11359-1/-2
Melting Point	220 °C	428 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	215 °C	419 °F	dry; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	dry; ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	cond; IEC 60093
	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	dry; IEC 60093
Surface Resistance	1.00e+14 ohm	1.00e+14 ohm	cond; IEC 60093
Dielectric Constant	3.3	3.3	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.5	3.5	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	4.5	4.5	cond; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	14	14	cond; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	20.0 kV/mm	508 kV/in	cond; IEC 60243-1
	25.0 kV/mm	635 kV/in	dry; IEC 60243-1
Dissipation Factor	0.0090	0.0090	dry; IEC 60250

Electrical Properties	@Frequency 100 Hz Metric	@Frequency 100 Hz English	Comments
	0.015	0.015	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	dry; IEC 60250
	0.12	0.12	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	cond; IEC 60250
	0.30	0.30	
	@Frequency 100 Hz	@Frequency 100 Hz	cond; IEC 60250
Comparative Tracking Index	600 V	600 V	cond; IEC 60112

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