

DSM Akulon® Ultraflow K-FHGM35 PA6-(GF+MD)40

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 20% Glass Fiber Filled

Material Notes:

15% Glass Reinforced, Heat Stabilized, High Flow

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Akulon-Ultraflow-K-FHGM35-PA6-GFMD40.php

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/in ³	dry; ISO 1183
Water Absorption	5.5 %	5.5 %	Sim. To ISO 62
Moisture Absorption	1.70 %	1.70 %	Sim. To ISO 62
Linear Mold Shrinkage, Flow	0.0030 cm/cm	0.0030 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0090 cm/cm	0.0090 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	65.0 MPa	9430 psi	cond; ISO 527-1/-2
	120 MPa	17400 psi	dry; ISO 527-1/-2
Elongation at Break	2.5 %	2.5 %	dry; ISO 527-1/-2
	5.0 %	5.0 %	cond; ISO 527-1/-2
Tensile Modulus	6.00 GPa	870 ksi	cond; ISO 527-1/-2
	9.03 GPa	1310 ksi	dry; ISO 527-1/-2
Flexural Strength	165 MPa	23900 psi	dry; ISO 178
Flexural Modulus	7.72 GPa	1120 ksi	dry; ISO 178
Charpy Impact Unnotched	3.00 J/cm ²	14.3 ft-lb/in ²	cond; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	3.00 J/cm ²	14.3 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	3.49 J/cm ²	16.6 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	4.49 J/cm ²	21.4 ft-lb/in ²	cond; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties Charpy Impact, Notched	Metric 0.399 J/cm²	English 1.90 ft-lb/in²	Comments dry; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.399 J/cm²	1.90 ft-lb/in²	cond; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.500 J/cm²	2.38 ft-lb/in²	dry; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	0.598 J/cm²	2.85 ft-lb/in²	cond; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	34.9 µm/m-°C	19.4 µin/in-°F	dry; ISO 11359-1/-2
CTE, linear, Transverse to Flow	50.0 µm/m-°C	27.8 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)	205 °C	401 °F	dry; ISO 75-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	cond; IEC 60093
	1.00e+14 ohm-cm	1.00e+14 ohm-cm	dry; IEC 60093
Surface Resistance	1.00e+13 ohm	1.00e+13 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	30.0 kV/mm	762 kV/in	cond; IEC 60243-1

Electrical Properties	35.0 kV/mm Metric	889 kV/in English	dry; IEC 60243-1 Comments
Dissipation Factor	0.0050	0.0050	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.014	0.014	dry; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.12	0.12	cond; IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	0.32	0.32	cond; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	

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