

DSM Akulon® K224-G8 PA6-GF40

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

Material Notes:

40% Glass Reinforced

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Akulon-K224-G8-PA6-GF40.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 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	0.0034 cm/cm	0.0034 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0083 cm/cm	0.0083 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	140 MPa	20300 psi	cond; ISO 527-1/-2
	205 MPa	29700 psi	dry; ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	dry; ISO 527-1/-2
	6.0 %	6.0 %	cond; ISO 527-1/-2
Tensile Modulus	8.00 GPa	1160 ksi	cond; ISO 527-1/-2
	13.0 GPa	1890 ksi	dry; ISO 527-1/-2
Flexural Strength	275 MPa	39900 psi	dry; ISO 178
Flexural Modulus	10.8 GPa	1570 ksi	dry; ISO 178
Charpy Impact Unnotched	8.50 J/cm ²	40.4 ft-lb/in ²	cond; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	8.50 J/cm ²	40.4 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.50 J/cm ²	45.2 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	10.0 J/cm ²	47.6 ft-lb/in ²	cond; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched			dry; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.30 J/cm ²	6.19 ft-lb/in ²	cond; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.80 J/cm ²	8.57 ft-lb/in ²	dry; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.60 J/cm ²	12.4 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	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)	220 °C	428 °F	dry; ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	200 °C	392 °F	dry; ISO 75-1/-2
Flammability, UL94	HB	HB	dry; IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	dry; IEC 60695-11-10
	@Thickness 0.710 mm	@Thickness 0.0280 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	cond; IEC 60093
	>= 1.00e+15 ohm-cm	>= 1.00e+15 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	
	4.4	4.4	cond; IEC 60250
	@Frequency 1.00e+6	@Frequency 1.00e+6	

Electrical Properties	Hz Metric	Hz English	Comments
	14	14	cond; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	25.0 kV/mm	635 kV/in	cond; IEC 60243-1
	35.0 kV/mm	889 kV/in	dry; IEC 60243-1
Dissipation Factor	0.0050	0.0050	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.015	0.015	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	
	0.30	0.30	cond; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	500 V	500 V	cond; IEC 60112

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