

DSM Akulon® K224-LG6 /E PA6-GF30

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Glass Fiber Filled

Material Notes:

30% Glass Reinforced, Injection Molding, Improved UV-stability

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Akulon-K224-LG6-E-PA6-GF30.php

Physical Properties	Metric	English	Comments
Density	1.35 g/cc	0.0488 lb/in ³	dry; ISO 1183
Water Absorption	6.3 %	6.3 %	Sim. To ISO 62
Moisture Absorption	1.90 %	1.90 %	Sim. To ISO 62
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	110 MPa	16000 psi	cond; ISO 527-1/-2
	180 MPa	26100 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	6.00 GPa	870 ksi	cond; ISO 527-1/-2
	9.50 GPa	1380 ksi	dry; ISO 527-1/-2
Flexural Strength	235 MPa	34100 psi	dry; ISO 178
Flexural Modulus	8.60 GPa	1250 ksi	dry; ISO 178
Charpy Impact Unnotched	7.50 J/cm ² @Temperature -30.0 °C	35.7 ft-lb/in ² @Temperature -22.0 °F	cond; ISO 179/1eU
	7.50 J/cm ² @Temperature -30.0 °C	35.7 ft-lb/in ² @Temperature -22.0 °F	dry; ISO 179/1eU
	9.00 J/cm ² @Temperature 23.0 °C	42.8 ft-lb/in ² @Temperature 73.4 °F	dry; ISO 179/1eU
	11.0 J/cm ² @Temperature 23.0 °C	52.3 ft-lb/in ² @Temperature 73.4 °F	cond; ISO 179/1eU

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched			dry; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.10 J/cm ²	5.23 ft-lb/in ²	cond; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	1.20 J/cm ²	5.71 ft-lb/in ²	dry; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	2.50 J/cm ²	11.9 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	70.0 µm/m-°C	38.9 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)	210 °C	410 °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 0.750 mm	@Thickness 0.0295 in	

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	
	5.0	5.0	cond; IEC 60250
	@Frequency 1.00e+6	@Frequency 1.00e+6	

Electrical Properties	Hz Metric	Hz English	Comments
	20	20	cond; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	25.0 kV/mm	635 kV/in	cond; IEC 60243-1
	30.0 kV/mm	762 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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