

DSM Akulon® K224-G3-FC NA99001 PA6-GF15

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

Material Notes:

15% Glass Reinforced

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Akulon-K224-G3-FC-NA99001-PA6-GF15.php

Physical Properties	Metric	English	Comments
Density	1.23 g/cc	0.0444 lb/in ³	dry; ISO 1183
Water Absorption	7.6 %	7.6 %	Sim. To ISO 62
Moisture Absorption	2.30 %	2.30 %	Sim. To ISO 62
Linear Mold Shrinkage, Flow	0.0032 cm/cm	0.0032 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0096 cm/cm	0.0096 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	70.0 MPa	10200 psi	cond; ISO 527-1/-2
	125 MPa	18100 psi	dry; ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	dry; ISO 527-1/-2
	12 %	12 %	cond; ISO 527-1/-2
Tensile Modulus	3.50 GPa	508 ksi	cond; ISO 527-1/-2
	6.00 GPa	870 ksi	dry; ISO 527-1/-2
Flexural Strength	170 MPa	24700 psi	dry; ISO 178
Flexural Modulus	5.20 GPa	754 ksi	dry; ISO 178
Charpy Impact Unnotched	4.00 J/cm ²	19.0 ft-lb/in ²	cond; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.00 J/cm ²	19.0 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.50 J/cm ²	21.4 ft-lb/in ²	dry; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	8.00 J/cm ²	38.1 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	
	0.600 J/cm²	2.86 ft-lb/in²	cond; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.700 J/cm²	3.33 ft-lb/in²	dry; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.50 J/cm²	7.14 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	30.0 µm/m-°C	16.7 µin/in-°F	dry; ISO 11359-1/-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C	44.4 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)	195 °C	383 °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+15 ohm-cm	1.00e+15 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	3.5	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	
	4.7	4.7	dry; 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	0.0055	0.0055	dry; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.018	0.018	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	
	0.15	0.15	cond; IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	cond; IEC 60112

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