

DSM Akulon® K224-HG3 (Dry) 15% Glass Reinforced Nylon 6 (North America)

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

Material Notes:

Description: The Akulon portfolio is engineered for optimum performance to suit different processing techniques and end use markets. Unfilled Extrusion Resins Akulon resins are available with melt viscosities to suit all extrusion processes: barrier and coating film, tube and hose, monofilament, stock shapes. Akulon resins are characterized by: consistent quality high purity for film applications, low gel contents. Molding Resins Suited to all engineering demands: Unfilled low and medium viscosity grades Toughened unfilled grades Glass reinforced from 20-45% filled Low warpage reinforced grades Flame retardant; UL V0 rated and glow wire types Halogen free FR grades Blow moldable materials Laser markable resins Laser weldable, high burst pressure grades Toughened, reinforced resins High stiffness grades for metal replacement Akulon Ultraflow resins have high flow with mechanical properties similar to standard materials. Exceptional flow allows: productivity gains in molding lower built in stresses better surface appearance system cost reductions Applications for Molding resins There is an Akulon resin available suitable for any application requiring polyamides. Key areas where DSM has specific application knowledge are Automotive Under the hood and engine components Exterior and interior applications Electrical components and connectors Electrical Low voltage power distribution Lighting Power connectors Consumer Durables Power and lawn and garden tools Small Appliances Sports and leisure equipment Furniture accessories Industrial Goods Transportation (railways) Information provided by DSM.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Akulon-K224-HG3-Dry-15-Glass-Reinforced-Nylon-6-North-America.php

Physical Properties	Metric	English	Comments
Density	1.23 g/cc	0.0444 lb/in ³	ISO 1183
Water Absorption	7.6 %	7.6 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	2.3 %	2.3 %	Humidity Absorption; Sim. to ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	130 MPa	18900 psi	ISO 527-1/-2
Elongation at Break	3.5 %	3.5 %	ISO 527-1/-2
Tensile Modulus	6.00 GPa	870 ksi	ISO 527-1/-2
Charpy Impact Unnotched	4.50 J/cm ²	21.4 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	5.00 J/cm ²	23.8 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.800 J/cm ²	3.81 ft-lb/in ²	ISO 179/1eA

Mechanical Properties	@Temperature 23.0 °C Metric	@Temperature 73.4 °F English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 µm/m-°C @Temperature 20.0 °C	16.7 µin/in-°F @Temperature 68.0 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature 20.0 °C	44.4 µin/in-°F @Temperature 68.0 °F	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	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	195 °C	383 °F	ISO 75-1/-2
UL RTI, Electrical	150 °C @Thickness 1.50 mm	302 °F @Thickness 0.0591 in	UL746B
	150 °C @Thickness 0.710 mm	302 °F @Thickness 0.0280 in	UL746B
UL RTI, Mechanical with Impact	120 °C @Thickness 0.710 mm	248 °F @Thickness 0.0280 in	UL746B
	125 °C @Thickness 1.50 mm	257 °F @Thickness 0.0591 in	UL746B
UL RTI, Mechanical without Impact	150 °C @Thickness 0.710 mm	302 °F @Thickness 0.0280 in	UL746B
	150 °C @Thickness 1.50 mm	302 °F @Thickness 0.0591 in	UL746B
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	IEC 60695-11-10
	HB @Thickness 0.710 mm	HB @Thickness 0.0280 in	IEC 60695-11-10
Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Dielectric Constant	3.5 @Frequency 100 Hz	3.5 @Frequency 100 Hz	IEC 60250

Electrical Properties	Metric	English	Comments
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	IEC 60250
Dielectric Strength	25.0 kV/mm	635 kV/in	IEC 60243-1
Dissipation Factor	0.0055	0.0055	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.018	0.018	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	425 V	425 V	IEC 60112
	400 - 599 V	400 - 599 V	PLC 1; UL 746A

Descriptive Properties	Value	Comments
Heat stabilized or stable to heat	Yes	
Injection molding	Yes	
Release Agent	Yes	
With Fillers	Yes	

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