

DSM Akulon® K224-TG9/A Nylon 6-45% Glass Reinforced (European Grade) (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , 50% Glass Fiber Filled

Material Notes:

The Akulon® product portfolio is engineered for optimum performance to suit different processing techniques and end use markets. Akulon Nylon 6 is used for extrusion applications including barrier film, stock shapes, convoluted tubes, and monofilament. Akulon XP is a high-productivity, high-performance PA6 grade for film extrusion processes. Medium viscosity, unreinforced or reinforced Akulon grades are used for various injection molding and blow molding applications. Akulon® Ultraflow® is a high-productivity, high-performance PA6 family for molding processes. Key applications for Akulon: Automotive: Intake manifold, Engine, Powertrain, Airbag containers, Exterior trim, Interior trim, Electrical components and connectors Consumer durables: Power tools, Lawn and garden tools, Small appliances, Sports and leisure equipment, Furniture, Industrial Goods, Transportation E&E: Low voltage switch gear/power distribution, Lighting, Power connectors Film: Specialty and barrier films Information provided by DSM.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Akulon-K224-TG9A-Nylon-6-45-Glass-Reinforced-European-Grade-Dry-nbspdiscontinued.php

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/in ³	ISO 1183
Water Absorption	5.0 %	5.0 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	1.5 %	1.5 %	Humidity Absorption; Sim. to ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	220 MPa	31900 psi	ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Tensile Modulus	14.5 GPa	2100 ksi	ISO 527-1/-2
Charpy Impact Unnotched	8.00 J/cm ²	38.1 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	10.0 J/cm ²	47.6 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	2.00 J/cm ²	9.52 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	20.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	11.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	50.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	27.8 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
Melting Point	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	10 $^{\circ}\text{C}/\text{min}$; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	215 $^{\circ}\text{C}$	419 $^{\circ}\text{F}$	ISO 75-1/-2
UL RTI, Electrical	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
UL RTI, Mechanical with Impact	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	65.0 $^{\circ}\text{C}$	149 $^{\circ}\text{F}$	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	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	IEC 60093
Dielectric Constant	3.5	3.5	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	5.2	5.2	IEC 60250

Electrical Properties	@Frequency 1e+6 Hz Metric	@Frequency 1e+6 Hz English	Comments
Dielectric Strength	25.0 kV/mm	635 kV/in	IEC 60243-1
Dissipation Factor	0.0050	0.0050	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.015	0.015	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Injection molding	Yes	
Release Agent	Yes	
With Fillers	Yes	

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