

DSM Akulon® K223-HMS6 Nylon 6-30% Mineral Reinforced (European and Asian Grade) (Dry) (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, 30% Mineral 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-K223-HMS6-Nylon-6-30-Mineral-Reinforced-European-and-Asian-Grade-Dry-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.56 g/cc	0.0564 lb/in ³	ISO 1183
Water Absorption	6.0 %	6.0 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	1.6 %	1.6 %	Humidity Absorption; Sim. to ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	75.0 MPa	10900 psi	ISO 527-1/-2
Elongation at Break	2.5 %	2.5 %	ISO 527-1/-2
Tensile Modulus	8.00 GPa	1160 ksi	ISO 527-1/-2
Charpy Impact Unnotched	4.00 J/cm ²	19.0 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	4.00 J/cm ²	19.0 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.500 J/cm ²	2.38 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.500 J/cm ²	2.38 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	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 $^{\circ}\text{F}$	
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)	205 $^{\circ}\text{C}$	401 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	ISO 75-1/-2
UL RTI, Electrical	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	UL746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	110 $^{\circ}\text{C}$	230 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 $^{\circ}\text{C}$	248 $^{\circ}\text{F}$	UL746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	UL746B
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-0	V-0	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-0	V-0	IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
Glow Wire Test	960 $^{\circ}\text{C}$	1760 $^{\circ}\text{F}$	Glow Wire Flammability Index; IEC 60695-2-12
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Dielectric Constant	3.2	3.2	IEC 60250

Electrical Properties	@Frequency 1e+6 Hz Metric	@Frequency 1e+6 Hz English	Comments
	3.6	3.6	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
	0.0085	0.0085	IEC 60250
Dissipation Factor	@Frequency 100 Hz	@Frequency 100 Hz	
	0.014	0.014	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	300 V	300 V	IEC 60112
	250 - 399 V	250 - 399 V	PLC 2; UL 746A

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

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