

DSM Akulon® K223-HM6 (BLACK) Nylon 6-30% Mineral Reinforced (European and Asian Grade) (Dry)

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-HM6-BLACK-Nylon-6-30-Mineral-Reinforced-European-and-Asian-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.38 g/cc	0.0499 lb/in ³	ISO 1183
Water Absorption	6.6 %	6.6 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	1.9 %	1.9 %	Humidity Absorption; Sim. to ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	80.0 MPa	11600 psi	ISO 527-1/-2
Elongation at Break	3.0 %	3.0 %	ISO 527-1/-2
Tensile Modulus	7.00 GPa	1020 ksi	ISO 527-1/-2
Flexural Strength	130 MPa	18900 psi	ISO 178
Flexural Modulus	6.00 GPa	870 ksi	ISO 178
Charpy Impact Unnotched	4.00 J/cm ²	19.0 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
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	0.400 J/cm ²	1.90 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	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eA Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 µm/m-°C @Temperature 20.0 °C	22.2 µin/in-°F @Temperature 68.0 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	40.0 µm/m-°C @Temperature 20.0 °C	22.2 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)	205 °C	401 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	135 °C	275 °F	ISO 75-1/-2
UL RTI, Electrical	140 °C @Thickness 1.50 mm	284 °F @Thickness 0.0591 in	UL746B
	140 °C @Thickness 0.710 mm	284 °F @Thickness 0.0280 in	UL746B
UL RTI, Mechanical with Impact	100 °C @Thickness 0.710 mm	212 °F @Thickness 0.0280 in	UL746B
	110 °C @Thickness 1.50 mm	230 °F @Thickness 0.0591 in	UL746B
UL RTI, Mechanical without Impact	140 °C @Thickness 1.50 mm	284 °F @Thickness 0.0591 in	UL746B
	140 °C @Thickness 0.710 mm	284 °F @Thickness 0.0280 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+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.0	3.0	IEC 60250

Electrical Properties	@Frequency 1e+6 Hz Metric	@Frequency 1e+6 Hz English	Comments
	3.2	3.2	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
	0.0050	0.0050	IEC 60250
Dissipation Factor	@Frequency 100 Hz	@Frequency 100 Hz	
	0.013	0.013	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	400 - 599 V	400 - 599 V	PLC 1; UL 746A
	500 V	500 V	IEC 60112

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

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