

DSM Akulon® K223-TP4 Impact Modified Nylon 6 (European and Asian Grade) (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Impact Grade

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-TP4-Impact-Modified-Nylon-6-European-and-Asian-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in ³	ISO 1183
Water Absorption	8.5 %	8.5 %	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, Yield	45.0 MPa	6530 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	ISO 527-1/-2
Elongation at Yield	3.5 %	3.5 %	ISO 527-1/-2
Tensile Modulus	2.10 GPa	305 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	2.50 J/cm ²	11.9 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	7.50 J/cm ²	35.7 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	120 $\mu\text{m/m-}^{\circ}\text{C}$	66.7 $\mu\text{in/in-}^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	120 $\mu\text{m/m-}^{\circ}\text{C}$	66.7 $\mu\text{in/in-}^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	130 $^{\circ}\text{C}$	266 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	50.0 $^{\circ}\text{C}$	122 $^{\circ}\text{F}$	ISO 75-1/-2
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	2.7	2.7	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.1	3.1	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	27.0 kV/mm	686 kV/in	IEC 60243-1
Dissipation Factor	0.0030	0.0030	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.016	0.016	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
High impact or impact modified	Yes	
Injection molding	Yes	
Release Agent	Yes	
Without Fillers	Yes	

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