

DSM Akulon® K225-KS Nylon 6 (European and Asian Grade) (Dry)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced

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-K225-KS-Nylon-6-European-and-Asian-Grade-Dry.php

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in ³	ISO 1183
Water Absorption	9.0 %	9.0 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	2.5 %	2.5 %	Humidity Absorption; Sim. to ISO 62

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	80.0 MPa	11600 psi	ISO 527-1/-2
Elongation at Break	8.0 %	8.0 %	ISO 527-1/-2
Elongation at Yield	3.0 %	3.0 %	ISO 527-1/-2
Tensile Modulus	3.80 GPa	551 ksi	ISO 527-1/-2
Charpy Impact Unnotched	5.50 J/cm ²	26.2 ft-lb/in ²	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	6.00 J/cm ²	28.6 ft-lb/in ²	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.800 J/cm ²	3.81 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	90.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	50.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	140 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	77.8 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	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)	200 $^{\circ}\text{C}$	392 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	ISO 75-1/-2
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 0.380 mm	@Thickness 0.0150 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.2	3.2	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.3	3.3	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.0090	0.0090	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.020	0.020	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Flame Retardant	Yes	
Flame Retarding Agent	Yes	
Heat stabilized or stable to heat	Yes	

<small>Injection molding</small> Descriptive Properties	Yes Value	Comments
Release Agent	Yes	
Without Fillers	Yes	

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