DSM Akulon® K225-KWS (Dry) Nylon 6 (North America)

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

Material Notes:

Description: The Akulon portfolio is engineered for optimum performance to suit different processing techniques and end use markets.Unfilled Extrusion ResinsAkulon resins are available with melt viscosities to suit all extrusion processes: barrier and coating film, tube and hose, monofilament, stock shapes. Akulon resins are characterized by:consistent qualityhigh purity for film applications, low gel contents. Molding ResinsSuited to all engineering demands: Unfilled low and medium viscosity gradesToughened unfilled gradesGlass reinforced from 20-45% filledLow warpage reinforced gradesFlame retardant; UL V0 rated and glow wire typesHalogen free FR gradesBlow moldable materialsLaser markable resinsLaser weldable, high burst pressure gradesToughened, reinforced resinsHigh stiffness grades for metal replacement Akulon Ultraflow resins have high flow with mechanical properties similar to standard materials. Exceptional flow allows: productivity gains in moldinglower built in stressesbetter surface appearancesystem cost reductions Applications for Molding resins There is an Akulon resin available suitable for any application requiring polyamides. Key areas where DSM has specific application knowledge areAutomotiveUnder the hood and engine componentsExterior and interior applicationsElectrical components and connectorsElectricalLow voltage power distributionLightingPower connectorsConsumer DurablesPower and lawn and garden toolsSmall AppliancesSports and leisure equipmentFurniture accessoriesIndustrial GoodsTransportation (railways)Information provided by DSM.

Order this product through the following link:
http://www.lookpolymers.com/polymer_DSM-Akulon-K225-KWS-Dry-Nylon-6-North-America.php

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in³	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/cm² @Temperature -30.0 °C	26.2 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eU
	6.00 J/cm² @Temperature 23.0 °C	28.6 ft-lb/in² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.600 J/cm² @Temperature -30.0 °C	2.86 ft-lb/in² @Temperature -22.0 °F	ISO 179/1eA

Mechanical Properties	Metric	English	Comments
	0.800 J/cm²	3.81 ft-lb/in²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C @Temperature 20.0 °C	50.0 µin/in-°F @Temperature 68.0 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	140 µm/m-°C @Temperature 20.0 °C	77.8 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)	200 °C	392 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	90.0 °C	194 °F	ISO 75-1/-2
Flammability, UL94	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	IEC 60695-11-10
	V-0 @Thickness 0.380 mm	V-0 @Thickness 0.0150 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	3.2 @Frequency 1e+6 Hz	3.2 @Frequency 1e+6 Hz	IEC 60250
	3.3 @Frequency 100 Hz	3.3 @Frequency 100 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.0090 @Frequency 100 Hz	0.0090 @Frequency 100 Hz	IEC 60250
	0.020 @Frequency 1e+6 Hz	0.020 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Flame Retardant	Yes	

Descriptive Properties	Value	Comments
Flame Retarding Agent	Yes	
Heat stabilized or stable to heat	Yes	
Injection molding	Yes	
Release Agent	Yes	
Without Fillers	Yes	

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