

DSM Akulon® F223-D (Dry) Low/Medium Viscosity 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 Resins Akulon 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 quality high purity for film applications, low gel contents. Molding Resins Suited to all engineering demands: Unfilled low and medium viscosity grades Toughened unfilled grades Glass reinforced from 20-45% filled Low warpage reinforced grades Flame retardant; UL V0 rated and glow wire types Halogen free FR grades Blow moldable materials Laser markable resins Laser weldable, high burst pressure grades Toughened, reinforced resins High stiffness grades for metal replacement Akulon Ultraflow resins have high flow with mechanical properties similar to standard materials. Exceptional flow allows: productivity gains in molding lower built in stresses better surface appearance system 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 are Automotive Under the hood and engine components Exterior and interior applications Electrical components and connectors Electrical Low voltage power distribution Lighting Power connectors Consumer Durables Power and lawn and garden tools Small Appliances Sports and leisure equipment Furniture accessories Industrial Goods Transportation (railways) Information provided by DSM.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Akulon-F223-D-Dry-LowMedium-Viscosity-Nylon-6-North-America.php

Physical Properties	Metric	English	Comments
Density	1.13 g/cc	0.0408 lb/in ³	ISO 1183
Water Absorption	10 %	10 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	2.8 %	2.8 %	Humidity Absorption; Sim. to ISO 62
Viscosity Test	129 cm ³ /g	129 cm ³ /g	Viscosity Number
Linear Mold Shrinkage, Flow	0.011 cm/cm	0.011 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	85.0 MPa	12300 psi	ISO 527-1/-2
Elongation at Break	20 %	20 %	ISO 527-1/-2
Elongation at Yield	4.0 %	4.0 %	ISO 527-1/-2
Tensile Modulus	3.20 GPa	464 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	ISO 179/1eJ Comments
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	
	0.800 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 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	100 µm/m-°C	55.6 µin/in-°F	ISO 11359-1/-2
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Melting Point	220 °C	428 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	150 °C	302 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	60.0 °C	140 °F	ISO 75-1/-2
Flammability, UL94	V-2	V-2	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	V-2	V-2	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	26 %	26 %	ISO 4589-1/-2
Glow Wire Test	775 °C	1430 °F	GWIT; IEC 60695-13
	@Thickness 38.1 mm	@Thickness 1.50 in	
	800 °C	1470 °F	GWFI; IEC 60695-12
	@Thickness 38.1 mm	@Thickness 1.50 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Dielectric Constant	3.1	3.1	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.4	3.4	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	

Dielectric Strength Electrical Properties	30.0 kV/mm Metric	752 kV/in English	IEC 60243-1 Comments
Dissipation Factor	0.0065	0.0065	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0165	0.0165	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Descriptive Properties	Value	Comments
Injection molding	Yes	
Release Agent	Yes	
Without Fillers	Yes	

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