

## DSM Akulon® F223-D 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-F223-D-Nylon-6-European-and-Asian-Grade-Dry.php](http://www.lookpolymers.com/polymer_DSM-Akulon-F223-D-Nylon-6-European-and-Asian-Grade-Dry.php)

Physical Properties	Metric	English	Comments
Density	1.13 g/cc	0.0408 lb/in <sup>3</sup>	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	142 cm <sup>3</sup> /g	142 cm <sup>3</sup> /g	Viscosity Number
Linear Mold Shrinkage, Flow	0.0095 cm/cm	0.0095 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0095 cm/cm	0.0095 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	90.0 MPa	13100 psi	ISO 527-1/-2
Elongation at Break	20 %	20 %	ISO 527-1/-2
Elongation at Yield	3.5 %	3.5 %	ISO 527-1/-2
Tensile Modulus	3.50 GPa	508 ksi	ISO 527-1/-2
Charpy Impact Unnotched	12.0 J/cm <sup>2</sup>	57.1 ft-lb/in <sup>2</sup>	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.500 J/cm <sup>2</sup>	2.38 ft-lb/in <sup>2</sup>	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	

Mechanical Properties	Metric $\frac{g}{cm^3}$	English $\frac{lb}{in^3}$	Comments ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 °C	50.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	100 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 °C	55.6 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @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)	185 °C	365 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	65.0 °C	149 °F	ISO 75-1/-2
Flammability, UL94	V-2 @Thickness 0.750 mm	V-2 @Thickness 0.0295 in	IEC 60695-11-10
	V-2 @Thickness 1.60 mm	V-2 @Thickness 0.0630 in	IEC 60695-11-10
Oxygen Index	26 %	26 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093
Dielectric Constant	3.1 @Frequency 1e+6 Hz	3.1 @Frequency 1e+6 Hz	IEC 60250
	3.4 @Frequency 100 Hz	3.4 @Frequency 100 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.0065 @Frequency 100 Hz	0.0065 @Frequency 100 Hz	IEC 60250
	0.0165 @Frequency 1e+6 Hz	0.0165 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

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

## Contact Songhan Plastic Technology Co.,Ltd.

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