DSM Akulon® F130 PA6

Category : Polymer , Film , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Extruded

Material Notes:

Film Extrusion, Medium Viscosity

Order this product through the following link:
http://www.lookpolymers.com/polymer_DSM-Akulon-F130-PA6.php

Physical Properties	Metric	English	Comments
Density	1.13 g/cc	0.0408 lb/in³	ISO 1183
Water Vapor Transmission	35.0 g/m²/day @Temperature 23.0 °C	2.25 g/100 in²/day @Temperature 73.4 °F	at 85% r.h., film; DIS 15106-1/-3
Oxygen Transmission	1.30 cc-mm/m²-24hr-atm @Temperature 23.0 °C	3.30 cc-mil/100 in²-24hr-atm @Temperature 73.4 °F	at 0% r.h., film; DIS 15105-1/-2
	1.90 cc-mm/m²-24hr-atm @Temperature 23.0 °C	4.83 cc-mil/100 in²-24hr-atm @Temperature 73.4 °F	at 85% r.h., film; DIS 15105-1/-2
Viscosity	810000 cP @Temperature 260 °C	810000 cP @Temperature 500 °F	Melt Viscosity; DSM method
	300000 cP @Shear Rate 1000 1/s, Temperature 280 °C	300000 cP @Shear Rate 1000 1/s, Temperature 536 °F	
	350000 cP @Shear Rate 1000 1/s, Temperature 260 °C	350000 cP @Shear Rate 1000 1/s, Temperature 500 °F	
	400000 cP @Shear Rate 1000 1/s, Temperature 240 °C	400000 cP @Shear Rate 1000 1/s, Temperature 464 °F	
	600000 cP @Shear Rate 0.100 1/s, Temperature 280 °C	600000 cP @Shear Rate 0.100 1/s, Temperature 536 °F	
	800000 cP @Shear Rate 0.100 1/s, Temperature 260 °C	800000 cP @Shear Rate 0.100 1/s, Temperature 500 °F	
	1.05e+6 cP @Shear Rate 0.100 1/s,	1.05e+6 cP @Shear Rate 0.100 1/s,	

Physical Properties	Metric	English	Comments
	Temperature 240 °C	Temperature 464 °F	
Viscosity Measurement	3.03	3.03	RSV formic acid, 1g/100ml; DSM method
Viscosity Test	196 cm³/g	196 cm³/g	Viscosity Number; ISO 307, 1157, 1628
Thickness	50.0 microns	1.97 mil	film

Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	31.0 MPa	4500 psi	parallel; ISO 527-3
Film Elongation at Break, MD	350 %	350 %	parallel; ISO 527-3
Modulus of Elasticity	0.455 GPa	66.0 ksi	film; DSM-Method, 50 mm/min
Coefficient of Friction, Dynamic	1.0	1.0	film; ISO 8295
Coefficient of Friction, Static	1.5	1.5	film; ISO 8295
Tear Strength Test	32	32	Trouser tear resistance, parallel, film; ISO 6383-1
Film Tensile Strength at Break, MD	82.0 MPa	11900 psi	parallel; ISO 527-3

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	90.0 µm/m-°C	50.0 µin/in-°F	ISO 11359-1/-2
Specific Heat Capacity	1.55 J/g-°C @Temperature 23.0 °C	0.370 BTU/lb-°F @Temperature 73.4 °F	
	2.25 J/g-°C @Temperature 20.0 - 150 °C	0.538 BTU/lb-°F @Temperature 68.0 - 302 °F	

Optical Properties	Metric	English	Comments
Transmission, Visible	83 %	83 %	film; DSM method

Processing Properties	Metric	English	Comments
Processing Temperature	270 °C	518 °F	Extruder Temperature
Die Temperature	270 °C	518 °F	
Roll Temperature	110 °C	230 °F	

Descriptive Properties	Value	Comments

Extrusion Type Cast Film

Descriptive Properties	Value	Comments
Puncture Resistance	1300 J/m	Film (DSM Method)

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