

Akulon® F136

Polyamide 6
DSM Engineering Plastics

Message:

Akulon® F136 is a polyamide 6 (nylon 6) material. This product is available in North America, Europe or Asia Pacific.

General Information			
Multi-Point Data	Specific Volume vs Temperature (ISO 11403-2)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm ³	ISO 1183
Viscosity Number	245	cm ³ /g	ISO 307
Mechanical	Nominal Value	Unit	Test Method
Coefficient of Friction (Dynamic, Cast Film)	1.0		ISO 8295
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	50	µm	
Tensile Modulus ¹ (50 µm, Cast Film)	450	MPa	Internal method
Tensile Stress - MD			ISO 527-3
Yield, 50 µm, cast film	31.0	MPa	ISO 527-3
Fracture, 50 µm, cast film	83.0	MPa	ISO 527-3
Tensile Elongation - MD (Broken, 50 µm, cast film)	350	%	ISO 527-3
Trouser Tear Resistance - MD (50 µm, Cast Film)	32.0	N/mm	ISO 6383-1
Water Vapor Transmission Rate (23°C, 85% RH, 50 µm, cast film)	35	g/m ² /24 hr	DIS 15106-1/-3
Oxygen Transmission Rate ²			DIS 15105-1/-2
0% RH : 23°C, 50.0 µm	27	cm ³ /m ² /bar/24 hr	DIS 15105-1/-2
85% RH : 23°C, 50.0 µm	39	cm ³ /m ² /bar/24 hr	DIS 15105-1/-2
Specific Heat Capacity			
--	1550	J/kg/°C	
Average	2250	J/kg/°C	
Puncture Resistance (50.0 µm) ³	14.0	J/cm	Internal method
RSV - Formic Acid, 1g/100 ml	3.60		Internal method
Thermal	Nominal Value	Unit	Test Method
CLTE - Flow	9.0E-5	cm/cm/°C	ISO 11359-2
Optical	Nominal Value	Unit	Test Method
Transmittance (50.0 µm, Cast Film)	83.0	%	Internal method
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (260°C)	2250	Pa · s	Internal method

Additional Information	Nominal Value	Unit	Test Method
Test Specimen Production (Film): Extruder Temperature: 270°C Die Temperature: 270°C Chill Roll Temperature: 110°C			
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	4.0 - 8.0	hr	
Rear Temperature	230 - 235	°C	
Middle Temperature	235 - 250	°C	
Front Temperature	240 - 260	°C	
Nozzle Temperature	240 - 270	°C	
Processing (Melt) Temp	240 - 275	°C	
Mold Temperature	50.0 - 80.0	°C	
Injection Rate	Moderate-Fast		
Back Pressure	3.00 - 10.0	MPa	
Screw Compression Ratio	2.5:1.0		
NOTE			
1.	50 mm/min		
2.	Cast Film		
3.	Cast Film		

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