

Akulon® F136-E2

Polyamide 6
DSM Engineering Plastics

Message:

Akulon® F136-E2 is a polyamide 6 (nylon 6) material. This product is available in North America, Europe or Asia Pacific. The processing method is: film extrusion.
Akulon® The main features of the F136-E2 are:
nucleation
high viscosity
Lubrication
Akulon® The typical application fields of F136-E2 are: movies

General Information			
Additive	Nucleating agent		
	Lubricant		
Features	Nucleated		
	Very high viscosity		
	Lubrication		
Uses	Films		
Forms	Particle		
Processing Method	Film extrusion		
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			ISO 8295
With itself-dynamic, cast film	0.80		ISO 8295
With itself-static, cast film	1.4		ISO 8295
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	50	µm	
Tensile Modulus ¹ (50 µm, Cast Film)	465	MPa	Internal method
Tensile Stress - MD			ISO 527-3
Yield, 50 µm, cast film	34.0	MPa	ISO 527-3
50 µm, cast film	94.0	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	23	cm ³ /m ² /bar/24 hr	DIS 15105-1/-2
85% RH : 23°C, 50.0 μm	33	cm ³ /m ² /bar/24 hr	DIS 15105-1/-2
Specific Heat Capacity			
--	1550	J/kg/°C	
Average: 20 to 150°C	2250	J/kg/°C	
Puncture Resistance (50.0 μm) ³	13.2	J/cm	Internal method
RSV ⁴	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)	85.0	%	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

Processing parameters for cast film test specimen:

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
4.	Formic Acid, 1g/100 ml

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