

Akulon® XP36-E1

Polyamide 6
DSM Engineering Plastics

Message:

Akulon®XP36-E1 is a polyamide 6 (nylon 6) material. This product is available in Europe, and the processing method is: film extrusion.
Akulon®The main features of the XP36-E1 are:
nucleation
Lubrication
Medium viscosity
Akulon®The typical application fields of XP36-E1 are: movies

General Information			
Additive	Nucleating agent		
	Lubricant		
Features	Nucleated		
	Lubrication		
	Medium viscosity		
Uses	Films		
Forms	Particle		
Processing Method	Film extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm ³	ISO 1183
Viscosity Number	194	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)	490	MPa	Internal method
Tensile Stress - MD			ISO 527-3
Yield, 50 µm, cast film	36.0	MPa	ISO 527-3
50 µm, cast film	96.0	MPa	ISO 527-3
Tensile Elongation - MD (Broken, 50 µm, cast film)	340	%	ISO 527-3
Trouser Tear Resistance - MD (50 µm, Cast Film)	23.0	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	21	cm ³ /m ² /bar/24 hr	DIS 15105-1/-2

85% RH : 23°C, 50.0 µm	32	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	12.0	J/cm	Internal method
RSV ⁴	3.00		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)	2740	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	225 - 230	°C
Middle Temperature	230 - 235	°C
Front Temperature	230 - 240	°C
Nozzle Temperature	230 - 250	°C
Processing (Melt) Temp	245 - 255	°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	

Extrusion	Nominal Value	Unit
Drying Temperature	75.0	°C
Drying Time	8.0 - 10	hr
Cylinder Zone 1 Temp.	240	°C
Cylinder Zone 2 Temp.	260	°C
Cylinder Zone 3 Temp.	260	°C
Adapter Temperature	270	°C
Die Temperature	260	°C

NOTE

1. 50 mm/min
2. Cast Film
3. Cast Film
4. Formic Acid, 1g/100 ml

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