

Akulon® XP32-E1

Polyamide 6
DSM Engineering Plastics

Message:

Akulon®XP32-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 XP32-E1 are:
nucleation
Medium viscosity

General Information			
Additive	Nucleating agent		
Features	Nucleated		
	Medium and high viscosity		
Processing Method	Film extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm ³	ISO 1183
Viscosity Number	177	cm ³ /g	ISO 307
Mechanical	Nominal Value	Unit	Test Method
Coefficient of Friction			ISO 8295
Dynamic, cast film	0.80		ISO 8295
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	31	cm ³ /m ² /bar/24 hr	DIS 15105-1/-2
Specific Heat Capacity			
--	1550	J/kg/°C	
Average: 20 to 150°C	2550	J/kg/°C	
Puncture Resistance (50.0 µm) ³	12.0	J/cm	Internal method
RSV ⁴	2.80		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)	1450	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
4. Formic Acid, 1g/100 ml

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