

Akulon® FC-X9200

Polyamide 6

DSM Engineering Plastics

Message:

Akulon® FC-X9200 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 FC-X9200 are:

nucleation

high viscosity

Lubrication

General Information			
Additive	Nucleating agent Lubricant		
Features	Nucleated Lubrication Viscosity, High		
Processing Method	Film extrusion		
Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm ³	ISO 1183
Viscosity Number	210	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	96.0	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	20	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			

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Average: 20 to 150°C	2250	J/kg/°C	
Puncture Resistance (50.0 μm) ³	12.3	J/cm	Internal method
RSV - Formic Acid, 1g/100 ml	3.20		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)	1120	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	°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 - 80	°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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