

SABIC® HDPE FI1157

High Density (HMW) Polyethylene

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® HDPE FI1157 is a high molecular high density polyethylene copolymer grade typically used for blown film applications. Its high molecular weight, broad molecular weight distribution and high density enables convertors to produce film with low gels level, high stiffness, impact resistance and with narrow gauge tolerances at low film thickness. SABIC® HDPE FI1157 can be processed at high throughput with good bubble stability.

Typical applications

SABIC® HDPE FI1157 is typically used for the production of liners, bitumen release foils, lamination and paper lamination films, labels, artificial paper, thin films for bag on roll and heavy duty bags.

Processing conditions

Melt Temperature: 200-225°C

Frost Line Height: 6-8 times die cross-cut

BUR: 3-5

Film properties

Film properties have been measured at 20 µm blown film with a BUR = 4.

The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/medical applications.

General Information			
Features	Low speed solidification crystal point		
	Rigidity, high		
	High molecular weight		
	High density		
	Copolymer		
	Impact resistance, high		
	Wide molecular weight distribution		
Uses	Blown Film		
	Films		
	Label		
	Laminate		
	Bags		
	Heavy packing bag		
Processing Method	Blow film		
Physical	Nominal Value	Unit	Test Method
Density	0.957	g/cm³	ISO 1183/A
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/21.6 kg	11	g/10 min	ISO 1133
190°C/5.0 kg	0.35	g/10 min	ISO 1133
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	62		ISO 868
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	20	µm	

Tensile Stress			ISO 527-3
MD: Yield, 20 μm	50.0	MPa	ISO 527-3
TD: Yield, 20 μm	45.0	MPa	ISO 527-3
Tensile Elongation			ISO 527-3
MD: Break, 20 μm	400	%	ISO 527-3
TD: Break, 20 μm	450	%	ISO 527-3
Dart Drop Impact ¹ (20 μm)	240	g	ASTM D1709
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	< -80.0	°C	ASTM D746
Vicat Softening Temperature	75.0	°C	ISO 306/B
Additional Information	Nominal Value	Unit	Test Method
Tear Strength			ISO 6383-2
MD : 20.0 μm	200.0	kN/m	ISO 6383-2
TD : 20.0 μm	450.0	kN/m	ISO 6383-2
Extrusion	Nominal Value	Unit	
Melt Temperature	200 - 225	°C	
NOTE			
1.	F50		

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