Lotrène® Q1018H

Linear Low Density Polyethylene

QATOFIN Company Limited

Product Description

Lotrène® Q1018 Series are Linear Low Density Polyethylene resins produced in a gas phase reactor using butene (C4) co-monomer.

They are designed for blown film applications and can be used in pure form as well as blended with other PE resins, such as LDPE or HDPE and mPE resins for mono extrusion or co-extrusion process to modify film properties.

Lotrène® Q1018 Series are suited for many applications in the field of consumer, agricultural, industrial, food or hygiene packaging, for example: collation shrink, liners, FFS bags, heavy duty sacks,
refuse, tunnel films, mulching films…

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	
Additive	• Antiblock (3200 ppm)	• Erucamide Slip (1500 ppm)	• Heat Stabilizer
Features	• Antiblocking • Butene Comonomer	• Heat Stabilized • Slip	
Uses	• Agricultural Applications • Bags • Blending • Consumer Applications	• Film • Food Packaging • Heavy-duty Bags • Industrial Applications	• Liners • Packaging • Shrink Wrap • Thin-walled Packaging
Processing Method	• Blown Film	• Coextruded Film	• Film Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.918	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Secant Modulus			ASTM D882
1% Secant, MD: 40 µm, Blown Film	215	MPa	
1% Secant, TD: 40 µm, Blown Film	245	MPa	
Tensile Strength			ASTM D882
MD: Yield, 40 µm, Blown Film	11.0	MPa	
TD: Yield, 40 µm, Blown Film	11.0	MPa	
MD: Break, 40 µm, Blown Film	38.0	MPa	
TD: Break, 40 µm, Blown Film	33.0	MPa	
Tensile Elongation			ASTM D882
MD: Break, 40 µm, Blown Film	800	%	
TD: Break, 40 µm, Blown Film	850	%	
Dart Drop Impact [2] (40 µm, Blown Film)	150	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD: 40 µm, Blown Film	280	g	
TD: 40 µm, Blown Film	480	g	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	100	°C	ASTM D1525
Peak Crystallization Temperature (DSC)	122	°C	Internal Method
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (45°, 40.0 µm, Blown Film)	60		ASTM D2457
Haze (40.0 µm, Blown Film)	11	%	ASTM D1003

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	180 to 220	°C
Cylinder Zone 2 Temp.	180 to 220	°C
Cylinder Zone 3 Temp.	180 to 220	°C
Cylinder Zone 4 Temp.	180 to 220	°C
Cylinder Zone 5 Temp.	180 to 220	°C
Melt Temperature	200	°C

Revision History
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Extrusion Notes

Blow-up ratio: 2:1 to 3:1
Die gap: >1.8 mm

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] F50

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