

QAPCO Lotrene® Q1018H

Lotrene® 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. This grade contains thermal stabilizers.

Physical Properties	Metric	English	Comments
Specific Gravity	0.918 g/cc	0.918 g/cc	ASTM D792
Thickness	40.0 microns	1.57 mil	
Melt Flow	1.0 g/10 min @Load 2.16 kg, Temperature 190 °C	1.0 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238
Antiblock Level	3200 ppm	3200 ppm	
Slip Level	1500 ppm	1500 ppm	Erucamide
Mechanical Properties	Metric	English	Comments
Film Tensile Strength at Yield, MD	11.0 MPa	1600 psi	ASTM D882
Film Tensile Strength at Yield, TD	11.0 MPa	1600 psi	ASTM D882
Film Elongation at Break, MD	800 %	800 %	ASTM D882
Film Elongation at Break, TD	850 %	850 %	ASTM D882
Elmendorf Tear Strength, MD	7.10 g/micron	180 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	12.2 g/micron	310 g/mil	ASTM D1922
Dart Drop Test	150 g	0.331 lb	F50; ASTM D1709
Film Tensile Strength at Break, MD	38.0 MPa	5510 psi	ASTM D882
Film Tensile Strength at Break, TD	33.0 MPa	4790 psi	ASTM D882
1% Secant Modulus, MD	215 MPa	31200 psi	ASTM D882

1% Secant Modulus, TD	245 MPa	35500 psi	ASTM D882
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Thermal Properties	Metric	English	Comments
Melting Point	122 °C	252 °F	Crystalline; ISO 11357

Vicat Softening Point	100 °C	212 °F	ASTM D1525 (A120)
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Optical Properties	Metric	English	Comments
Haze	11 %	11 %	ASTM D1003

Gloss	60 %	60 %	at 45°; ASTM D2457
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Processing Properties	Metric	English	Comments
Processing Temperature	180 - 220 °C	356 - 428 °F	Extrusion

Melt Temperature	200 °C	392 °F	
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Die Opening	>= 0.180 cm	>= 0.0709 in	
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Blow-up Ratio (BUR)	2.0 - 3.0	2.0 - 3.0	
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