

# QAPCO Lotrene<sup>®</sup> Q2018N

Lotrene<sup>®</sup> Q2018 Series are Linear Low Density Polyethylene resins produced in a gas phase reactor using butene (C4) co-monomer. They are designed for 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.

Physical Properties	Metric	English	Comments
Specific Gravity	0.918 g/cc	0.918 g/cc	ISO 1183
Thickness	40.0 microns	1.57 mil	
Melt Flow	2.0 g/10 min @Load 2.16 kg, Temperature 190 °C	2.0 g/10 min @Load 4.76 lb, Temperature 374 °F	ASTM D1238
Antiblock Level	0.000 ppm	0.000 ppm	
Slip Level	0.000 ppm	0.000 ppm	

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	850 %	850 %	ASTM D882
Film Elongation at Break, TD	900 %	900 %	ASTM D882
Elmendorf Tear Strength, MD	5.60 g/micron	142 g/mil	ASTM D1922
Elmendorf Tear Strength, TD	10.7 g/micron	272 g/mil	ASTM D1922
Dart Drop Test	130 g	0.287 lb	F50; ASTM D1709
Film Tensile Strength at Break, MD	35.0 MPa	5080 psi	ASTM D882
Film Tensile Strength at Break, TD	32.0 MPa	4640 psi	ASTM D882
1% Secant Modulus, MD	215 MPa	31200 psi	ASTM D882
1% Secant Modulus, TD	245 MPa	35500 psi	ASTM D882

Thermal Properties	Metric	English	Comments
Melting Point	121 °C	250 °F	Crystalline; ISO 11357
Vicat Softening Point	100 °C	212 °F	ASTM D1525 (A120)

Optical Properties	Metric	English	Comments
Haze	14 %	14 %	ASTM D1003
Gloss	55 %	55 %	at 45°; ASTM D2457

Processing Properties	Metric	English	Comments
Processing Temperature	170 - 210 °C	338 - 410 °F	Extrusion
Melt Temperature	190 °C	374 °F	
Die Opening	>= 0.180 cm	>= 0.0709 in	
Blow-up Ratio (BUR)	2.0 - 3.0	2.0 - 3.0	