



# 18F1M.DEV Resin Family

## Linear Low-Density Polyethylene Resin

### Technical Data Sheet



#### Product Description

Shell Polymers 18F1M Resin Family are 1 MI mLLDPE blown film resins.

#### Grades

18F1M.DEV

18F1M6.DEV

#### Additive Packages

Thermal Stabilizer

Thermal Stabilizer, PFAS-Free PPA\*



#### Highlights

- Produces films that have superior puncture resistance and toughness
- Gas phase technology
- Low gel
- Designed for recyclability

Resin Properties	Method	Nominal Value
Density	ASTM D792	0.918 g/cm <sup>3</sup>
Melt Index (190°C / 2.16 kg)	ASTM D1238	1.0 g/10 min

Mechanical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Thickness		1.0 mil	25 µm
Tear Strength, MD	ASTM D1922	270 g	270 g
Tear Strength, TD	ASTM D1922	390 g	390 g
Dart Drop Impact	ASTM D1709	>1000 g	>1000 g
Tensile Strength at Break, MD	ASTM D882	9700 psi	67 MPa
Tensile Strength at Break, TD	ASTM D882	8200 psi	57 MPa
Tensile Strength at Yield, MD	ASTM D882	1750 psi	12 MPa
Tensile Strength at Yield, TD	ASTM D882	1750 psi	12 MPa
Tensile Elongation at Break, MD	ASTM D882	610 %	610 %
Tensile Elongation at Break, TD	ASTM D882	710 %	710 %
1% Secant Modulus, MD	ASTM D882	25800 psi	178 MPa
1% Secant Modulus, TD	ASTM D882	30100 psi	208 MPa

Optical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Haze	ASTM D1003	26 %	26 %
Gloss at 45°	ASTM D2457	27	27

Thermal Properties	Method	Nominal Value (English)	Nominal Value (SI)
Vicat Softening Temperature	ASTM D1525	228 °F	109 °C

Optical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Peak Melting Temperature	ASTM D1525	244 °F	118 °C

**Processing Statement:**

Film properties are typical for blown film produced on a line with 75mm screw, 250mm die diameter, and 2mm die gap. Properties will vary with process conditions. \*Film properties are derived from 18F1M6 product.

**Regulatory Statement:**

- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.1a or 3.2a
- Consult the Regulatory Data Sheet for more details. It is available upon request. Please contact your Account Manager

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