



55F035 High-Density Polyethylene Resin

Technical Data Sheet



Product Description

Shell Polymers 55F035 is a high molecular weight, ethylene hexene copolymer exhibiting good barrier properties, good grease resistance, high stiffness, good heat resistance, and is compatible in linear low density and low-density polyethylene blends.



Highlights

- Designed for blown film applications.
- Suitable for use in stand-up pouches, heavy duty shipping sacks, oriented films, and form-fill and seal structures.
- Produced via slurry loop technology.

Resin Properties	Method	Nominal Value
Density	ASTM D792	0.955 g/cm ³
Melt Index (190 °C / 2.16 kg)	ASTM D1238	0.35 g/10 min

Mechanical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Thickness (mil)	-	1.00 mil	1.00 mil
Dart Drop Impact	ASTM D1709	<55 g	<55 g
Tear Strength MD	ASTM D1922	<20 g	<20g
Tear Strength TD	ASTM D1922	440 g	440 g
Tensile Strength at Break, MD	ASTM D882	6700 psi	46.5 MPa
Tensile Strength at Break, TD	ASTM D882	3400 psi	23.5 MPa
Tensile Stress at Yield, MD	ASTM D882	5000 psi	34.5 MPa
Tensile Stress at Yield, TD	ASTM D882	3800 psi	26.5 MPa
Tensile Elongation at Break, MD	ASTM D882	420%	420%
Tensile Elongation at Break, TD	ASTM D882	17%	17%
1% Secant Modulus, MD	ASTM D882	100800 psi	695 MPa
1% Secant Modulus, TD	ASTM D882	143000 psi	985 MPa
Puncture	ASTM D5748	22 ft-lb	30 N
Coefficient of Friction- Static	ASTM D1894	0.234	0.234
Coefficient of Friction- Kinetic	ASTM D1894	0.230	0.230

Optical Properties	Method	Nominal Value (English)	Nominal Value (SI)
Haze	ASTM D1003	65%	65%
Gloss at 45°	ASTM D2457	11	11

Thermal Properties	Method	Nominal Value (English)	Nominal Value (SI)
Peak Crystallization Temperature	DSC	270.1 °F	132.3 °C

Barrier Properties	Method	Nominal Value (English)	Nominal Value (SI)
Oxygen Transmission Rate (100% O ₂ , 73.4 °F, 0% RH)	ASTM D3985	5750 cc/m ² -day	5750 cc/m ² -day
Water Vapor Transmission Rate (100% RH, 100 °F)	ASTM F1249	13.0 g/m ² -day	13.0 g/m ² -day

Notes

Typical properties only. Not to be construed as specifications. Users should confirm results by performing their own tests.

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.

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.

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