

DOWLEX™ 2045.01 G

Linear Low Density Polyethylene Resin

Overview

DOWLEX 2045.01G Polyethylene Resin is designed for the production of a wide variety of industrial and consumer films. Films made from this resin exhibit a combination of excellent toughness and tear resistance. The product also delivers very good processability on conventional LLDPE machinery. DOWLEX 2045.01G Polyethylene Resin contains slip and antiblock additives.

Applications:

- Thin gauge industrial & consumer films
- Heavy duty films

Complies with:

- EU, No 10/2011
- U.S. FDA 21 CFR 177.1520(c)3.2a
- Consult the regulations for complete details.

Additive

- Antiblock: 2000 ppm
- Slip: 800 ppm
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.922 g/cm ³	0.922 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 mil	51 µm	
Film Puncture Resistance (2.0 mil (51 µm))	230 ft·lb/in ³	19.0 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD : 2.0 mil (51 µm)	4180 ft·lb/in ³	346 J/cm ³	
TD : 2.0 mil (51 µm)	4240 ft·lb/in ³	351 J/cm ³	
Secant Modulus			ASTM D882
2% Secant, MD : 2.0 mil (51 µm)	28100 psi	194 MPa	
2% Secant, TD : 2.0 mil (51 µm)	33800 psi	233 MPa	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (51 µm)	1600 psi	11.0 MPa	
TD : Yield, 2.0 mil (51 µm)	1740 psi	12.0 MPa	
MD : Break, 2.0 mil (51 µm)	7980 psi	55.0 MPa	
TD : Break, 2.0 mil (51 µm)	7250 psi	50.0 MPa	
Tensile Elongation			ASTM D882
MD : Break, 2.0 mil (51 µm)	830 %	830 %	
TD : Break, 2.0 mil (51 µm)	890 %	890 %	
Dart Drop Impact (2.0 mil (51 µm))	290 g	290 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 2.0 mil (51 µm)	900 g	900 g	
TD : 2.0 mil (51 µm)	1200 g	1200 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	226 °F	108 °C	ASTM D1525
Melting Temperature	252 °F	122 °C	DSC
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 2.01 mil (51.0 µm))	54	54	ASTM D2457
Haze (2.01 mil (51.0 µm))	13 %	13 %	ASTM D1003

Additional Information

Film & Optical Properties: Blown film, BUR 2.5.

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	374 to 464 °F	190 to 240 °C

Extrusion Notes

Fabrication Conditions For Tubular Film Extrusion:

- Die Gap: 1.6 to 2.5 mm
- Melt Temperature: 190 to 240°C
- Blow-Up Ratio Range: 1.50 to 3:1.
- Recommended Gauge Range: 10 to 150 μm

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

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