

**DOWLEX™ 2045.01 G**  
**Linear Low Density Polyethylene Resin**  
 The Dow Chemical Company [Web](#)



### Product Description

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.

### General

Material Status	• Commercial: Active
Literature <sup>1</sup>	• <a href="#">Technical Datasheet</a>
Search for UL Yellow Card	• <a href="#">The Dow Chemical Company</a>
Availability	• Asia Pacific      • Europe
Additive	• Antiblock (2000 ppm)      • Slip (800 ppm)
Agency Ratings	• EU No 10/2011      • FDA 21 CFR 177.1520(c) 3.2a
Forms	• Pellets

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.924		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238

Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	2.0	mil	
Film Puncture Resistance (2.0 mil)	230	ft·lb/in <sup>3</sup>	Internal Method
Film Toughness			ASTM D882
MD: 2.0 mil	4180	ft·lb/in <sup>3</sup>	
TD: 2.0 mil	4240	ft·lb/in <sup>3</sup>	
Secant Modulus			ASTM D882
2% Secant, MD: 2.0 mil	28100	psi	
2% Secant, TD: 2.0 mil	33800	psi	
Tensile Strength			ASTM D882
MD: Yield, 2.0 mil	1600	psi	
TD: Yield, 2.0 mil	1740	psi	
MD: Break, 2.0 mil	7980	psi	
TD: Break, 2.0 mil	7250	psi	

Tensile Elongation		ASTM D882
MD: Break, 2.0 mil	830 %	
TD: Break, 2.0 mil	890 %	
Dart Drop Impact (2.0 mil)	290 g	ASTM D1709A
Elmendorf Tear Strength		ASTM D1922
MD: 2.0 mil	900 g	
TD: 2.0 mil	1200 g	
<b>Thermal</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Vicat Softening Temperature	226 °F	ASTM D1525
Melting Temperature	252 °F	DSC
<b>Optical</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Gloss (45°, 2.01 mil)	54	ASTM D2457
Haze (2.01 mil)	13 %	ASTM D1003

#### Additional Information

Film & Optical Properties: Blown film, BUR 2.5.

#### Extrusion

#### Nominal Value Unit

Melt Temperature 374 to 464 °F

#### 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

<sup>1</sup> These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.



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#### Revision History

Added to Prospector: May 2005  
Last Updated: 22/07/2011

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