



# DOWLEX™ 2050B

## High Density Polyethylene Resin

**Overview** DOWLEX™ 2050B Polyethylene Resin is a High Density Polyethylene, 1-Octene Copolymer, produced in the SOLUTION™ technology.

Main Applications:

- Films that require high stiffness
- Monofilaments

Complies with:

- U.S. FDA 21 177 1520 (c) 3.2a
- EU, No 10/2011
- Consult the regulations for complete details.

<b>Additive</b>	• Antiblock: No	• Slip: No	• Processing Aid: No
<b>Physical</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Density	0.950 g/cm <sup>3</sup>	0.950 g/cm <sup>3</sup>	ASTM D1505
Base Density <sup>1</sup>	0.950 g/cm <sup>3</sup>	0.950 g/cm <sup>3</sup>	Dow Method
Melt Index (190°C/2.16 kg)	0.95 g/10 min	0.95 g/10 min	ASTM D1238
<b>Films</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Film Thickness - Tested	2.0 mil	51 µm	
Film Puncture Resistance (2.0 mil (51 µm))	14.6 ft·lb/in <sup>3</sup>	1.21 J/cm <sup>3</sup>	Dow Method
Secant Modulus			ASTM D882
2% Secant, MD : 2.0 mil (51 µm)	83100 psi	573 MPa	
2% Secant, TD : 2.0 mil (51 µm)	105000 psi	726 MPa	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (51 µm)	3500 psi	24.1 MPa	
TD : Yield, 2.0 mil (51 µm)	4370 psi	30.1 MPa	
MD : Break, 2.0 mil (51 µm)	6120 psi	42.2 MPa	
TD : Break, 2.0 mil (51 µm)	6060 psi	41.8 MPa	
Tensile Elongation			ASTM D882
MD : Break, 2.0 mil (51 µm)	1100 %	1100 %	
TD : Break, 2.0 mil (51 µm)	1200 %	1200 %	
Dart Drop Impact (2.0 mil (51 µm))	120 g	120 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 2.0 mil (51 µm)	40 g	40 g	
TD : 2.0 mil (51 µm)	110 g	110 g	
<b>Optical</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Gloss (45°, 2.00 mil (50.8 µm))	45	45	ASTM D2457
Haze (2.00 mil (50.8 µm))	23 %	23 %	ASTM D1003

### Extrusion Notes

Processing Conditions for blown film:

- Die gap: 70 mil (1.8 mm)
- Melt temperature: 457°F (236°C)
- Blow-up Ratio: 2.5:1
- Speed: 40 rpm

### Notes

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

<sup>1</sup> Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm<sup>3</sup>. Base density is the estimated density of the polymer if it did not contain any antiblock.

