



DOWLEX™ 2042G Polyethylene Resin

- Overview**
- Linear Low Density Polyethylene
 - Good tear strength, medium stiffness, outstanding toughness
 - Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a.
 - Consult the regulations for complete details.

- Additive**
- Antiblock: No
 - Slip: No
 - Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.930 g/cm ³	0.930 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 mil	51 µm	
Film Puncture Resistance (1.0 mil (25 µm))	127 ft·lb/in ³	10.5 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD : 1.0 mil (25 µm)	3960 ft·lb/in ³	327 J/cm ³	
TD : 1.0 mil (25 µm)	4000 ft·lb/in ³	331 J/cm ³	
Tensile Strength			ASTM D882
MD : Yield, 1.0 mil (25 µm)	2260 psi	15.6 MPa	
TD : Yield, 1.0 mil (25 µm)	2430 psi	16.7 MPa	
MD : Break, 1.0 mil (25 µm)	7630 psi	52.6 MPa	
TD : Break, 1.0 mil (25 µm)	6460 psi	44.5 MPa	
Tensile Elongation			ASTM D882
MD : Break, 1.0 mil (25 µm)	730 %	730 %	
TD : Break, 1.0 mil (25 µm)	810 %	810 %	
Dart Drop Impact (1.0 mil (25 µm))	110 g	110 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 1.0 mil (25 µm)	210 g	210 g	
TD : 1.0 mil (25 µm)	520 g	520 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	242 °F	117 °C	ASTM D1525
Melting Temperature (DSC)	253 °F	123 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 1.00 mil (25.4 µm))	68	68	ASTM D2457
Haze (1.00 mil (25.4 µm))	9.40 %	9.40 %	ASTM D1003
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	457 °F	236 °C	

Extrusion Notes

- Fabrication Conditions For Blown Film:
- Screw Size: 2.5 in. (63.5 mm); 24:1 L/D
 - Screw Type: Single Flight Double Mix
 - Die Gap: 70 mil (1.8 mm)
 - Melt Temperature: 457°F (236°C)
 - Output: 8 lb/hr/in. of die circumference
 - Die Diameter: 6 in.
 - Blow-Up Ratio: 2.5:1
 - Screw Speed: 65 rpm
 - Frost Line Height: 29 in. (737 mm)

