



DOWLEX™ 2042EC

Polyethylene Resin

Overview

DOWLEX™ 2042EC Polyethylene Resin is an ethylene/octene-1 copolymer suitable for the production of blown film requiring good tear strength and outstanding toughness with good stiffness and temperature resistance.

Note: DOWLEX 2042EC Polyethylene Resin should comply with FDA regulation 177.1520, Canadian HPFB No Objection (With Limitations) and with most European food contact regulations when used unmodified and processed according to good manufacturing practices for food contact applications.

Please, contact your nearest Dow office for food contact compliance statements. The purchaser remains responsible for determining whether the use complies with all relevant regulations.

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
Base Density ¹	0.930 g/cm ³	0.930 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus - 2% Secant (Compression Molded)	49300 psi	340 MPa	ASTM D638
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1 mil	25 µm	
Film Puncture Energy (0.98 mil (25 µm))	8.85 in·lb	1.00 J	Dow Method
Tensile Strength			ASTM D882
MD : Yield, 0.98 mil (25 µm)	2030 psi	14.0 MPa	
TD : Yield, 0.98 mil (25 µm)	2470 psi	17.0 MPa	
MD : Break, 0.98 mil (25 µm)	6090 psi	42.0 MPa	
TD : Break, 0.98 mil (25 µm)	5950 psi	41.0 MPa	
Tensile Elongation			ASTM D882
MD : Break, 0.98 mil (25 µm)	830 %	830 %	
TD : Break, 0.98 mil (25 µm)	1100 %	1100 %	
Dart Drop Impact (0.98 mil (25 µm))	90 g	90 g	ASTM D1709
Elmendorf Tear Strength ²			ASTM D1922
MD : 0.98 mil (25 µm)	100 g	100 g	
TD : 0.98 mil (25 µm)	620 g	620 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	244 °F	118 °C	ASTM D1525
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (20°, 0.980 mil (24.9 µm))	30	30	ASTM D2457
Haze (0.980 mil (24.9 µm))	12.0 %	12.0 %	ASTM D1003

Extrusion Notes

Fabrication Conditions For Tubular Film Extrusion:

- Melt Temperature: 190 to 240°C
- Blow-Up Ratio Range: 1.5 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.

¹ 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/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

² Method B

