



DOWLEX™ 3010 Polyethylene Resin

Overview

- Linear Low Density Polyethylene
- For flexible packaging, overwraps and lamination applications
- Complies with U.S. FDA 21 CFR 177.1520 (c)
- Complies with Canadian HPFB No Objection (With Limitations)
- Complies with Europe EU-Directive 2002/72/EC (See Notes)
- Complies with Japan Hygienic Styrene Plastics Association
- This resin may be used to manufacture articles for use in packing or holding food during cooking. This statement refers to the extraction limitations only, not to the product's physical utility.
- Consult the regulations for complete details.

DOWLEX™ 3010 Polyethylene Resin is a polyethylene polymer designed to offer high performance properties such as excellent Environmental Stress Crack Resistance (ESCR), tear strength, abrasion resistance, and strong heat seals in thin extrusion coatings.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.921 g/cm ³	0.921 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	5.4 g/10 min	5.4 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Coefficient of Friction vs. Itself - Dynamic	0.60	0.60	ASTM D1894 ¹
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Seal Initiation Temperature	239 °F	115 °C	Dow Method ²
Water Vapor Transmission Rate	1.6 g·mil/100in ² /at m/24 hr	0.63 g·mm/m ² /atm/ 24 hr	ASTM F1249 ¹
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	212 °F	100 °C	ASTM D1525
Melting Temperature (DSC)	255 °F	124 °C	Dow Method
Extrusion	Nominal Value (English)	Nominal Value (SI)	Test Method
Melt Temperature	600 to 620 °F	316 to 327 °C	
Maximum Line Speed	19200 in/min	8.1 m/sec	Dow Method
Minimum Coating Thickness	0.280 mil	0.280 mil	Dow Method
Minimum Coating Weight	4.2 lb/ream	6.8 g/m ²	Dow Method
Neck-in 610°F (321°C), 0.00100 in (0.0254 mm)	4.9 in	124.5 mm	Dow Method

Extrusion Notes

Fabrication Conditions For Extrusion Coating Film:

- Screw Size: 3.5" (89 mm) 30:1 L/D
- Screw Type: Single Flight with Maddock Mixer
- Die Gap: 20 mil (0.508 mm)
- Melt Temperature: 600 °F (315 °C)
- Output: 250 lb/hr
- Screw Speed: 90 rpm

Notes

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

¹ 1.0 mil (25µm) coating onto 50 lbKraft paper.

² 1.0 mil (25µm) coating onto 50 lbKraft paper.

Temperature at which 1 lb/in. (4.4 N/25.4 mm) heat seal strength is achieved.

Heat Seal Strengths, Topwave HT Tester 0.5 S dwell, 40 psi bar pressure, pull speed 150 mm/sec.

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