



DOWLEX™ 3010

The Dow Chemical Company - Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

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.

- Linear Low Density Polyethylene
- For flexible packaging, overwraps and lamination applications

Complies with:

- U.S. FDA 21 CFR 177.1520 (c)
- Canadian HPFB No Objection (With Limitations)
- EU, No 10/2011
- 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.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• EU No 10/2011 • FDA 21 CFR 177.1520(c)	• HPFB (Canada) No Objection ¹ • JHOSPA Unspecified Rating	
Forms	• Pellets		
Processing Method	• Extrusion Coating		

ASTM & ISO Properties²

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.923		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	5.4	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Coefficient of Friction ³ (vs. Itself - Dynamic)	0.60		ASTM D1894
Films	Nominal Value	Unit	Test Method
Seal Initiation Temperature ⁴	239	°F	Internal Method
Water Vapor Transmission Rate ³	1.6	g·mil/100in ² /atm/24 hr	ASTM F1249
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	212	°F	ASTM D1525
Melting Temperature (DSC)	255	°F	Internal Method

Processing Information

Extrusion	Nominal Value	Unit	Test Method
Melt Temperature	600 to 620	°F	
Maximum Line Speed	26.7	ft/sec	Internal Method
Minimum Coating Thickness	0.28	mil	Internal Method
Minimum Coating Weight	4.2	lb/ream	Internal Method

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Extrusion	Nominal Value	Unit	Test Method
Neck-in (610°F, 1.0 mil)	4.9	in	Internal 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

¹ With limitations

² Typical properties: these are not to be construed as specifications.

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

⁴ 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.