

Technical Information



DOW™ LDPE 586A

Low Density Polyethylene Resin

Overview

Dow LDPE 586A is:

- Resin for general purpose applications
- Optimum gauge range: 0.8 - 3.0 mil
- Complies with U.S. FDA 21 CFR 177.1520 (c) 2.1.
- Complies with Canadian HPFB No Objection (With Limitations)
- Complies with Europe EU-Directive 2002/72/EC (See Notes)
- Consult the regulations for complete details.

Additive

- Antiblock: 1200 ppm
- Slip: 750 ppm
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.921 g/cm ³	0.921 g/cm ³	ASTM D792
Base Density ¹	0.922 g/cm ³	0.922 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	3.0 g/10 min	3.0 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 mil	51 µm	
Film Puncture Resistance	15.0 ft-lb/in ³	1.24 J/cm ²	Dow Method
Film Toughness			ASTM D882
MD	1910 ft-lb/in ³	158 J/cm ²	
TD	1900 ft-lb/in ³	157 J/cm ²	
Tensile Strength			ASTM D882
MD : Yield	1770 psi	12.2 MPa	
TD : Yield	1760 psi	12.2 MPa	
MD : Break	3170 psi	21.8 MPa	
TD : Break	2510 psi	17.3 MPa	
Tensile Elongation			ASTM D882
MD : Break	510 %	510 %	
TD : Break	660 %	660 %	
Dart Drop Impact	94 g	94 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	500 g	500 g	
TD	460 g	460 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	198 °F	92.2 °C	ASTM D1525
Melting Temperature (DSC)	230 °F	110 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	69	69	ASTM D2457
Haze	9.50 %	9.50 %	ASTM D1003

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: 40 mil
- Melt Temperature: 375 °F (190 °C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Frost Line Height: 29 in. (737 mm)



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.



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