



DOW™ LDPE 608A

Low Density Polyethylene Resin

Overview

- A formulated clarity film resin for thin gauge optical packaging
- Optimum gauge range: 0.8 - 2.5 mil
- Complies with U.S. FDA 21 CFR 177.1520 (c) 2.2.
- Complies with EU, No 10/2011
- Consult the regulations for complete details.

Additive

- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.923 g/cm ³	0.923 g/cm ³	ASTM D792
Base Density ¹	0.923 g/cm ³	0.923 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	2.6 g/10 min	2.6 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Puncture Resistance			Dow Method
1.0 mil (25 µm), Cast Film	44.0 ft·lb/in ³	3.64 J/cm ³	
2.0 mil (51 µm), Blown Film	42.0 ft·lb/in ³	3.47 J/cm ³	
Film Toughness			ASTM D882
MD : 1.0 mil (25 µm), Cast Film	997 ft·lb/in ³	82.5 J/cm ³	
MD : 2.0 mil (51 µm), Blown Film	2240 ft·lb/in ³	186 J/cm ³	
TD : 1.0 mil (25 µm), Cast Film	1320 ft·lb/in ³	109 J/cm ³	
TD : 2.0 mil (51 µm), Blown Film	2500 ft·lb/in ³	207 J/cm ³	
Tensile Strength			ASTM D882
MD : Yield, 1.0 mil (25 µm), Cast Film	2050 psi	14.1 MPa	
MD : Yield, 2.0 mil (51 µm), Blown Film	1810 psi	12.5 MPa	
TD : Yield, 1.0 mil (25 µm), Cast Film	1490 psi	10.3 MPa	
TD : Yield, 2.0 mil (51 µm), Blown Film	1840 psi	12.7 MPa	
MD : Break, 1.0 mil (25 µm), Cast Film	3920 psi	27.0 MPa	
MD : Break, 2.0 mil (51 µm), Blown Film	3400 psi	23.4 MPa	
TD : Break, 1.0 mil (25 µm), Cast Film	2100 psi	14.5 MPa	
TD : Break, 2.0 mil (51 µm), Blown Film	2990 psi	20.6 MPa	
Tensile Elongation			ASTM D882
MD : Break, 1.0 mil (25 µm), Cast Film	180 %	180 %	
MD : Break, 2.0 mil (51 µm), Blown Film	580 %	580 %	
TD : Break, 1.0 mil (25 µm), Cast Film	490 %	490 %	
TD : Break, 2.0 mil (51 µm), Blown Film	780 %	780 %	
Dart Drop Impact			ASTM D1709A
1.0 mil (25 µm), Cast Film	72 g	72 g	
2.0 mil (51 µm), Blown Film	87 g	87 g	
Elmendorf Tear Strength			ASTM D1922
MD : 1.0 mil (25 µm), Cast Film	140 g	140 g	
MD : 2.0 mil (51 µm), Blown Film	450 g	450 g	
TD : 1.0 mil (25 µm), Cast Film	150 g	150 g	
TD : 2.0 mil (51 µm), Blown Film	430 g	430 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	207 °F	97.2 °C	ASTM D1525
Melting Temperature (DSC)	235 °F	113 °C	Dow Method



Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss			ASTM D2457
45°, 2.00 mil (50.8 µm), Blown Film	81	81	
45°, 1.00 mil (25.4 µm), Cast Film	87	87	
Haze			ASTM D1003
2.00 mil (50.8 µm), Blown Film	5.70 %	5.70 %	
1.00 mil (25.4 µm), Cast Film	2.20 %	2.20 %	

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (64 mm); 30:1 L/D
- Screw Type: Single Flight Double Mix
- Die Gap: 40 mil (1.0 mm)
- Melt Temperature: 413 °F (212 °C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 91 rpm
- Frost Line Height: 30 in. (762 mm)

Fabrication Conditions For Cast Film:

- Screw A, Size: 2 in. (51 mm); 30:1 L/D
 - Melt Temperature: 500°F (260°C)
 - Screw Speed: 49 rpm
- Screw B, Size: 2.5 in. (63.5 mm); 30:1 L/D
 - Melt Temperature: 500°F (260°C)
 - Screw Speed: 30 rpm
- Screw C, Size: 2.5 in. (63.5 mm); 30:1 L/D
 - Melt Temperature: 500°F (260°C)
 - Screw Speed: 34 rpm
- Screw D, Size: 2.5 in. (63.5 mm); 30:1 L/D
 - Melt Temperature: 501°F (261°C)
 - Screw Speed: 33 rpm
- Screw E, Size: 2 in. (51 mm); 30:1 L/D
 - Melt Temperature: 500°F (260°C)
 - Screw Speed: 39 rpm
- Screw Type: DSB II
- Die Gap: 25 mil (0.6 mm)
- Chill Roll Temperature: 70°F (21°C)
- Line Speed: 400 fpm (123 m/min)

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.

