



DOW™ LDPE 608A

The Dow Chemical Company - Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

- 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.

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Antiblock: No • Processing Aid: No • Slip: No
Agency Ratings	• EU No 10/2011 • FDA 21 CFR 177.1520(c) 2.2
Forms	• Pellets
Processing Method	• Blown Film • Cast Film

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.925		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	2.6	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Puncture Resistance			Internal Method
1.0 mil, Cast Film	44.0	ft-lb/in ³	
2.0 mil, Blown Film	42.0	ft-lb/in ³	
Film Toughness - MD			ASTM D882
1.0 mil, Cast Film	997	ft-lb/in ³	
2.0 mil, Blown Film	2240	ft-lb/in ³	
Film Toughness - TD			ASTM D882
1.0 mil, Cast Film	1320	ft-lb/in ³	
2.0 mil, Blown Film	2500	ft-lb/in ³	
Tensile Strength - MD			ASTM D882
Yield, 1.0 mil, Cast Film	2050	psi	
Yield, 2.0 mil, Blown Film	1810	psi	
Tensile Strength - TD			ASTM D882
Yield, 1.0 mil, Cast Film	1490	psi	
Yield, 2.0 mil, Blown Film	1840	psi	
Tensile Strength - MD			ASTM D882
Break, 1.0 mil, Cast Film	3920	psi	
Break, 2.0 mil, Blown Film	3400	psi	
Tensile Strength - TD			ASTM D882
Break, 1.0 mil, Cast Film	2100	psi	
Break, 2.0 mil, Blown Film	2990	psi	
Tensile Elongation - MD			ASTM D882
Break, 1.0 mil, Cast Film	180	%	
Break, 2.0 mil, Blown Film	580	%	

DOW™ LDPE 608A

The Dow Chemical Company - Low Density Polyethylene Resin

Films	Nominal Value	Unit	Test Method
Tensile Elongation - TD			ASTM D882
Break, 1.0 mil, Cast Film	490	%	
Break, 2.0 mil, Blown Film	780	%	
Dart Drop Impact			ASTM D1709A
1.0 mil, Cast Film	72	g	
2.0 mil, Blown Film	87	g	
Elmendorf Tear Strength - MD			ASTM D1922
1.0 mil, Cast Film	140	g	
2.0 mil, Blown Film	450	g	
Elmendorf Tear Strength - TD			ASTM D1922
1.0 mil, Cast Film	150	g	
2.0 mil, Blown Film	430	g	
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	207	°F	ASTM D1525
Melting Temperature (DSC)	235	°F	Internal Method
Optical	Nominal Value	Unit	Test Method
Gloss			ASTM D2457
45°, 2.00 mil, Blown Film	81		
45°, 1.00 mil, Cast Film	87		
Haze			ASTM D1003
2.00 mil, Blown Film	5.70	%	
1.00 mil, Cast Film	2.20	%	

DOW™ LDPE 608A

The Dow Chemical Company - Low Density Polyethylene Resin

Processing Information

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

¹ Typical properties: these are not to be construed as specifications.