



# DOW™ LDPE 751A

## Low Density Polyethylene Resin

### Overview

- A high additive film resin for general packaging applications
- For cast film extrusion
- A fast blooming resin for high speed bag conversion
- Complies with U.S. FDA 21 CFR 177.1520 (c) 2.2
- Complies with Canadian HPFB No Objection (With Limitations)
- Complies with EU, No 10/2011
- Complies with Japan Hygienic Olefin and Styrene Plastics Association
- Consult the regulations for complete details.

### Additive

- Antiblock: 2900 ppm
- Slip: 2640 ppm
- Processing Aid: No

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.925 g/cm <sup>3</sup>	0.925 g/cm <sup>3</sup>	ASTM D792
Base Density <sup>1</sup>	0.923 g/cm <sup>3</sup>	0.923 g/cm <sup>3</sup>	Dow Method
Melt Index (190°C/2.16 kg)	6.4 g/10 min	6.4 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1 mil	20 µm	
Film Puncture Resistance (0.80 mil (20 µm))	11.0 ft-lb/in <sup>3</sup>	0.910 J/cm <sup>3</sup>	Dow Method
Film Toughness			ASTM D882
MD : 0.80 mil (20 µm)	951 ft-lb/in <sup>3</sup>	78.7 J/cm <sup>3</sup>	
TD : 0.80 mil (20 µm)	1140 ft-lb/in <sup>3</sup>	94.4 J/cm <sup>3</sup>	
Tensile Strength			ASTM D882
MD : Yield, 0.80 mil (20 µm)	2010 psi	13.9 MPa	
TD : Yield, 0.80 mil (20 µm)	1660 psi	11.4 MPa	
MD : Break, 0.80 mil (20 µm)	4700 psi	32.4 MPa	
TD : Break, 0.80 mil (20 µm)	1850 psi	12.8 MPa	
Tensile Elongation			ASTM D882
MD : Break, 0.80 mil (20 µm)	150 %	150 %	
TD : Break, 0.80 mil (20 µm)	440 %	440 %	
Dart Drop Impact (0.80 mil (20 µm))	25 g	25 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 0.80 mil (20 µm)	200 g	200 g	
TD : 0.80 mil (20 µm)	100 g	100 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	205 °F	96.1 °C	ASTM D1525
Melting Temperature (DSC)	235 °F	113 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 0.800 mil (20.3 µm))	80	80	ASTM D2457
Haze (0.800 mil (20.3 µm))	4.40 %	4.40 %	ASTM D1003



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## Extrusion Notes

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### Fabrication Conditions For Cast Film:

- Screw A, Size: 2 in. (51 mm); 30:1 L/D
  - Melt Temperature: 449°F (232°C)
  - Screw Speed: 54 rpm
- Screw B, Size: 2.5 in. (63.5 mm); 30:1 L/D
  - Melt Temperature: 449°F (232°C)
  - Screw Speed: 36 rpm
- Screw C, Size: 2.5 in. (63.5 mm); 30:1 L/D
  - Melt Temperature: 450°F (232°C)
  - Screw Speed: 38 rpm
- Screw D, Size: 2.5 in. (63.5 mm); 30:1 L/D
  - Melt Temperature: 450°F (232°C)
  - Screw Speed: 37 rpm
- Screw E, Size: 2 in. (51 mm); 30:1 L/D
  - Melt Temperature: 449°F (232°C)
  - Screw Speed: 43 rpm
- Screw Type: DSB II
- Die Gap: 25 mil (0.6 mm)
- Chill Roll Temperature: 70°F (21°C)
- Line Speed: 600 fpm (183 m/min)

## Notes

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

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<sup>1</sup> 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/cm<sup>3</sup>. Base density is the estimated density of the polymer if it did not contain any antiblock.

