



# DOW™ LDPE 320E

## Low Density Polyethylene Resin

### Overview

DOW LDPE 320E is a fractional melt index low density polyethylene resin. DOW LDPE 320E has been specially designed for the use in applications where high clarity and gloss are required. The improved optical performance can also be observed in LLDPE blends, more pronounced in LDPE rich structures. This resin due to its excellent draw down, allows for thin structures as required in some applications.

**Applications:**

Food packaging, Display packaging, Lamination films for consumer packaging,

**Main Characteristics:**

- Excellent processability and draw down
- Designed for applications requiring exceptional optical performance, pure as well as in blends with LLDPE

**DOW LDPE 320E should comply with:**

- U.S. FDA 21 CFR 177.1520 ( c )2.2
- EU, No 10/2011

Consult the regulations for complete details.

Slip Additive: 0 ppm

Antiblock Additive: 0 ppm

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
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Coefficient of Friction	0.50 to 0.70	0.50 to 0.70	ASTM D1894
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 mil	50 µm	
Film Puncture Energy (2.0 mil (50 µm))	15.0 in·lb	1.70 J	Dow Method
Film Puncture Force (2.0 mil (50 µm))	11.2 lbf	50.0 N	Dow Method
Film Puncture Resistance (2.0 mil (50 µm))	48.3 ft·lb/in <sup>3</sup>	4.00 J/cm <sup>3</sup>	Dow Method
Secant Modulus			ASTM D882
2% Secant, MD : 2.0 mil (50 µm), Blown Film	25400 psi	175 MPa	
2% Secant, TD : 2.0 mil (50 µm), Blown Film	26100 psi	180 MPa	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (50 µm), Blown Film	1740 psi	12.0 MPa	
TD : Yield, 2.0 mil (50 µm), Blown Film	1740 psi	12.0 MPa	
MD : Break, 2.0 mil (50 µm), Blown Film	3190 psi	22.0 MPa	
TD : Break, 2.0 mil (50 µm), Blown Film	2900 psi	20.0 MPa	
Tensile Elongation			ASTM D882
MD : Break, 2.0 mil (50 µm), Blown Film	360 %	360 %	
TD : Break, 2.0 mil (50 µm), Blown Film	550 %	550 %	
Dart Drop Impact			ASTM D1709A
2.0 mil (50 µm), Blown Film	120 g	120 g	
Elmendorf Tear Strength			ASTM D1922
MD : 2.0 mil (50 µm), Blown Film	460 g	460 g	
TD : 2.0 mil (50 µm), Blown Film	290 g	290 g	
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 1.97 mil (50.0 µm), Blown Film)	71	71	ASTM D2457
Haze (1.97 mil (50.0 µm), Blown Film)	6.8 %	6.8 %	ASTM D1003

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**Extrusion Notes**

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## Fabrication Conditions For Blown Film:

- Screw Type: Universal
- Output: 29 kg/hr
- Die Diameter: 150in.
- Blow-Up Ratio: 2.5
- Screw Speed: 74 rpm

**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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<b>North America</b>		<b>Europe/Middle East</b>	+800-3694-6367
U.S. & Canada:	1-800-441-4369		+31-11567-2626
	1-989-832-1426	Italy:	+800-783-825
Mexico:	+1-800-441-4369		
<b>Latin America</b>		<b>South Africa</b>	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	<b>Asia Pacific</b>	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

[www.dowplastics.com](http://www.dowplastics.com)

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