

# DOW™ LDPE 410E

## Low Density Polyethylene Resin



### Overview

DOW LDPE 410E Low Density Polyethylene Resin is a high clarity resin designed for lamination film and clarity over wrap applications. This resin does not contain slip and antiblock additives. It can be readily extruded using conventional blown film techniques utilising melt temperatures between 170 and 195°C; and cast film using temperatures between 180 and 240 °C. This resin when properly fabricated shows: excellent processability and draw down, outstanding toughness and impact properties, superior optical properties, excellent tensile and tear strength.

Applications:

- Lamination films
- Food packaging films
- Hygiene films
- Cast films
- Air-bubble film
- Foamed PE
- Extrusion coating

Complies with:

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

Consult the regulations for complete details.

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)	2.0 g/10 min	2.0 g/10 min	ISO 1133
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Coefficient of Friction vs. Itself - Dynamic	0.60 to 0.80	0.60 to 0.80	ASTM D1894
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2 mil	50 µm	
Secant Modulus			ASTM D882
2% Secant, MD : 2.0 mil (50 µm)	27600 psi	190 MPa	
2% Secant, TD : 2.0 mil (50 µm)	29000 psi	200 MPa	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (50 µm)	1450 psi	10.0 MPa	
TD : Yield, 2.0 mil (50 µm)	1600 psi	11.0 MPa	
MD : Break, 2.0 mil (50 µm)	3190 psi	22.0 MPa	
TD : Break, 2.0 mil (50 µm)	2900 psi	20.0 MPa	
Tensile Elongation			ASTM D882
MD : Break, 2.0 mil (50 µm)	450 %	450 %	
TD : Break, 2.0 mil (50 µm)	650 %	650 %	
Dart Drop Impact (2.0 mil (50 µm))	110 g	110 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 2.0 mil (50 µm)	500 g	500 g	
TD : 2.0 mil (50 µm)	400 g	400 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	205 °F	96.0 °C	ISO 306/A
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (20°, 1.97 mil (50.0 µm))	80	80	ASTM D2457
Haze (1.97 mil (50.0 µm))	6.90 %	6.90 %	ASTM D1003
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	338 to 383 °F	170 to 195 °C	

### Extrusion Notes

Blow-up ratio 1:2.5

