



DOW™ LDPE 450E

Low Density Polyethylene Resin

Overview

DOW LDPE 450 E Low Density Polyethylene Resin has been designed with an optimum balance of melt strength and drawability to give excellent performance in cast film, foam, blown film and bubble film extrusion. When properly fabricated, DOW LDPE 450 E displays: excellent processability; low neck-down (cast film); very good toughness and impact properties; and good tear strength. In foam extrusion, DOW LDPE 450 E gives an ideal balance between cell growth and stabilization to allow the production of very low density products without voids.

Main Characteristics:

- Cast film
- Foam
- Bubble film
- General purpose blown film

Complies with:

- The requirements for use in contact with food of the EU, No 10/2011. Contact a Dow Sales office to obtain a detailed food contact compliance letter for this product.
- U.S. FDA 21 CFR 177.1520(c)2.2.
- Canadian HPFB No Objection

Consult the regulations for complete details.

Slip Additive: None

Antiblock Additive: None

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.923 g/cm ³	0.923 g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	2.0 g/10 min	2.0 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2 mil	50 µm	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (50 µm)	1490 psi	10.3 MPa	
TD : Yield, 2.0 mil (50 µm)	1770 psi	12.2 MPa	
MD : Break, 2.0 mil (50 µm)	3030 psi	20.9 MPa	
TD : Break, 2.0 mil (50 µm)	2630 psi	18.1 MPa	
Tensile Elongation			ASTM D882
MD : Break, 2.0 mil (50 µm)	400 %	400 %	
TD : Break, 2.0 mil (50 µm)	550 %	550 %	
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)	430 g	430 g	
TD : 2.0 mil (50 µm)	370 g	370 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	210 °F	99.0 °C	ASTM D1525
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (20°, 1.97 mil (50.0 µm))	66	66	ASTM D2457
Haze (1.97 mil (50.0 µm))	7.50 %	7.50 %	ASTM D1003
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	379 °F	193 °C	

Extrusion Notes

Fabrication Conditions For Blown Film:

- Melt Temperature: 193°C
- Blow-Up Ratio: 1 to 2.5

