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/cm³	0.923	g/cm³	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

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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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Additional Information

North America		**Europe/Middle East**	+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		
Latin America		**South Africa**	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	**Asia Pacific**	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

www.dowplastics.com

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