



Formosa Plastics®

Formolene®
Low Density Polyethylene

Quality, Value and Performance

Discover Formolene® Polyethylene LDPE Resins

When success is essential, Formosa is your quality choice

Formosa Plastics' new line of Low Density Polyethylene (LDPE) resins complete the family of polyethylene resins in Formosa Plastics' North American portfolio. LDPE resins remain sought-after resins for their excellent balance of optics, puncture, tear and shrink properties, whether they are being used by themselves or within a blend of linear low density polyethylene (LLDPE) or high density polyethylene (HDPE). Formosa Plastics' Formolene® line of resins are made using a tubular LDPE process. The technology behind this process plant is one of the best in the industry, recognized for its excellent optics and high rate of on stream production.

LDPE resins are used in many diverse applications, such as collation shrink film, pallet shrink film, frozen food packaging, overwraps, shopper bags, lamination films, form-fill and seal packaging, agricultural film,

construction film, garment film, diaper backsheet and heavy-duty films.

Along with our broad portfolio of Formolene® LLDPE and HDPE line of resins, we have a solution for your needs. We offer products with a wide range of densities, melt indices and additive packages. Let us help you create a solution to meet your needs with our Formolene® line of LDPE, LLDPE and HDPE resins.



Delivering Value

At Formosa, we understand that it's more than just PE film, it's your business. Delivering value means:

- PE film grades that process over a wide range of film gauges and extrusion speeds;
- PE film grades that process at different blow-up ratios at standard output rates with excellent property retention and performance;
- PE film grades that are safe and clean, that meet FDA and CHPB requirements;
- PE film grades that help you meet your green/sustainability initiatives for reduction in use, recyclability and low carbon footprint.



Defining Performance

We're willing to work with you to satisfy your application requirements, with PE film grades that bring the right balance of performance, economics and quality:

- Tensile strength for toughness;
- Tensile elongation properties for puncture resistance;
- Excellent sealing performance over a wide range of temperatures;
- Excellent film surface performance for opacity and printability;
- Excellent optical properties for haze and gloss.



Formosa Plastics®

Optimized LDPE Film Resins

Applied Polymer Innovation

Products & Technical Specifications (Selected Materials)

Grade Types	Fractional Melt Grades			General Purpose (Liner) Grade	Clarity Grades		
Grades	FR2233C	FR2955	FR2375C FR2375D	FL2220C FL2202A	FC2502A	FC3403C	FC2304E
Resin Properties							
Density ASTM D1505, g/cm ³	0.922	0.929	0.923	0.923	0.925	0.934	0.923
Melt Index ASTM D1238, g/10 min	0.33	0.55	0.75	2.00	2.00	3.00	4.00
Additives							
Anti-Block, ppm	0	0	C - 0 D - 450	C - 0 A - 1,000	1000	No	1200
Slip Agent, ppm	0	0	C - 0 D - 500	C - 0 A - 750	750	No	900
Thermal Stabilizer	Yes	No	Yes	Yes	Yes	Yes	Yes
Film Properties							
Tensile Strength at Yield MD/TD, ASTM D882, psi	1,800/1,700	1,900/1,900	-	1,600/1,600	-	2,200/2,200	1,500/1,400
Tensile Strength at Break MD/TD, ASTM D882, psi	2,900/2,500	4,500/3,900	4,000/3,200	3,600/3,200	4,000/2,600	3,200/2,600	3,300/2,200
Elongation at Break MD/TD, ASTM D882, %	280/540	460/610	310/530	330/550	120/470	430/560	180/490
1% - Secant Modulus MD/TD, ASTM D882, psi	33,000/41,000	41,000/46,000	35,000/40,000	30,000/33,000	37,000/47,000	54,000/54,000	25,000/30,000
Dart Drop Impact, ASTM D1709A, g	490	120	180	80	70	60	70
Elmendorf Tear Strength MD/TD, ASTM D1922, g	260/460	200/260	350/150	150/120	370/80	100/170	290/110
Optical Properties							
Gloss (45), ASTM D2457	45	69	59	63	62	73	71
Haze, ASTM D1003, %	15.0%	6.0%	8.4%	6.1%	7.4%	6.0%	5.2%
Processing Conditions on a 200mm (7.9mil) die, with a die gap of 1.0mm (39.4mil) and a Blow-Up Ratio of 2.5							
Test Specimens Film Thickness	150µm (5.9mil)	50µm (1.97mil)	50µm (1.97mil)	30µm (1.8mil)	30µm (1.18mil)	30µm (1.18mil)	30µm (1.18mil)
Temperature Profile	145 - 190°C (293 - 374°F)	180 - 190°C (356 - 374°F)	180 - 190°C (356 - 374°F)	140 - 170°C (284 - 338°F)	180 - 190°C (356 - 374°F)	140 - 170°C (284 - 338°F)	180 - 190°C (356 - 374°F)
Applications	Blend Resin; Foams; Form Fill & Seal Pkg; Agricultural & Construction Film; Pallet & High Performance Collation Shrink Film	Blend Resin; Lamination Film; Co-Extrusion Films; Medium Duty Shrink Film	Blend Resin; Freezer Bags; Lamination Films; Shopper Bags; Form Fill & Seal Pkg.; Agricultural Film; Co-Extrusion Films; Collation & Medium Duty Shrink Films	Blend Resin; Freezer & Produce Bags; Cast Films, Lamination Films; Shopper Bags; Compounding; Textile Pkg.; Foams; Liners; Form Fill & Seal Pkg.; Medium Sized Mold-ing; Profile Extrusion; Mail Bags; Light Duty Shrink Films	Blend Resin; Freezer, Produce Bread & Salad Bags; Lamination Films; Textile Pkg.; Textile Pkg.; Light Duty Shrink Films; High Clarity; Food Pkg.; Display Pkg. Film	Cast Film; Label Film; Tissue & Paper Towel Overwrap; Melt Embossed Film	Produce Bags; Cast Film; Profile Extrusion; Zipper Bags; High Clarity Film; Laundry Film

Our Commitment

Quality and consistency, together with our technical service, provide excellent value and produce components that consistently perform as required.

- **Quality and Consistency** – We will deliver resins that meet or exceed customers' requirements.
- **Performance** – Help customers produce consistent, valued components that perform to specifications for durability, appearance and safety.
- **Value** – Provide excellent per unit component value – from resin grade selection, purchase and delivery to optimized processability and final component production.
- **Technical Service** – Provide top-notch, responsive technical service that develops prompt, accurate solutions.

Your Partner for Polymer Solutions

With corporate headquarters in Livingston, New Jersey, Formosa Plastics Corporation, U.S.A. owns and operates two vertically integrated chemical manufacturing subsidiaries located in Baton Rouge, Louisiana; and Point Comfort, Texas. Through affiliated facilities located in Ningbo (China), Mailiao (Taiwan) and Linyuan (Taiwan), we can meet international demands.

Our business operations include the production of polyethylene, polypropylene, suspension and dispersion polyvinyl chloride, chlor-alkali and olefins.

For more information about Formosa Plastics' products or to discuss a custom application for a no obligation quote, visit www.fpcusa.com or speak with your company representative directly by calling 888.372.8723.

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