Film, Extrusion Coating & Geomembrane Products

MARFLEX® POLYETHYLENE
MARLEX® POLYETHYLENE
K-RESIN® SBC

BLOWN FILM

CAST FILM

EXTRUSION COATING & LAMINATION

Quality products from

Chevron Phillips Chemical Company LP

The Woodlands, Texas

Film & Extrusion Coating Products

Chevron Phillips Chemical Company LP (Chevron Phillips Chemical) offers a full range of innovative film & extrusion coating products designed to meet the most challenging customer needs. With multiple manufacturing platforms, you can count on our leading-edge technologies and application development expertise when selecting the right material for your application. Whether you're in need of MarFlex® polyethylene, K-Resin® styrene-butadiene copolymer, or both, we have the product for you.

MarFlex® Polyethylene

Chevron Phillips Chemical produces a variety of polyethylene products. These products are designed to meet the needs of a wide range of flexible packaging applications, such as blown and cast films, extrusion coating, laminations and more.

ATTRIBUTES	APPLICATIONS
METALLOCENE POLYETHYLENE	
Superior Toughness	High Clarity
Improved Optics	Coextrusion
LOW DENSITY LINEAR POLYETHYLENE	
Processibility	Heavy Duty Films
Toughness	Shrink Films
HIGH DENSITY POLYETHYLENE	
Low Moisture and Gas Permeability	Liner Films - Cereal, Crackers
Higher Softening Temperature	Grocery Bags
Chemically Resistant	Extrusion Coating
LOW DENSITY POLYETHYLENE	
Processibility	Bakery
Clarity	Overwrap
Low Temperature Sealing	Coex Films (seal layer)
Good Shrink Properties	Extrusion Coating
LINEAR LOW DENSITY POLYETHYLENE	
Improved Toughness	Trash Bags
Higher Tensile Strength	Industrial Liners
MEDIUM DENSITY POLYETHYLENE	
Processibility	Heavy Bags
Stiffness	Industrial Films

Cast Film

The cast film process differs dramatically from the blown film process primarily due to the fast quench cooling of the chill roll. This fast quench is responsible for the unidirectional orientation characteristics of cast film. These characteristics allow a cast film line to operate at higher production rates, while producing amazing optics. Applications in food and retail packaging take advantage of these strengths. The products below are our solutions to your cast film application needs.

HDPE - CAST FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
9607	6.5	0.962	0	0	No	Food & Retail Packaging
9608XD	8.0	0.962	0	0	Yes	Food & Retail Packaging

LDPE - CAST FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
1122	2.1	0.920	0	0	No	General Purpose Packaging
4553	4.1	0.924	650	0	No	Embossed Liner
4571	4.1	0.924	0	0	No	Embossed Liner
5428	2.2	0.930	1000	10000	No	Converter Film, Bakery Bag
5429	2.2	0.930	600	10000	No	Converter Film, Bakery Bag
5430	2.2	0.925	0	0	No	Overwrap & Converter Film
5440	2.2	0.925	1000	0	No	Overwrap & Converter Film

LLDPE - CAST FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
7120X	2.0	0.919	0	0	No	Food & Retail Packaging
7120B	2.0	0.919	1000	0	No	Food & Retail Packaging
7235	3.5	0.923	0	0	No	Food Packaging
7235B	3.5	0.923	1000	0	No	Converter Film, Bakery Bag

Notes: MI = g/10 min, Density = g/cc, Slip/Antiblock = ppm

MARFLEX® POLYETHYLENE

Blown Film

The blown film process is the most diverse conversion system used for polyethylene. ASTM defines films as less than 0.254 mm (10 mils) in thickness. Monolayer and multilayer coextrusion technologies lay the groundwork for finding the right products for the application. The blown film process allows some control of properties such as clarity, toughness, and strength via process conditions and resin type. Our highly experienced technical support team can help customers define the blown film processing conditions needed to optimize performance, while our world-class sales and marketing team can assist customers with resin selection and provide other valuable customer services. The products below are our solutions to your blown film application needs.

METALLOCENE - mPACT™ BLOWN FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
D139	1.0	0.918	0	0	Yes	Blown Film
D139DK	1.0	0.918	0	5000	Yes	Blown Film
D139EK	1.0	0.918	500	5000	Yes	Blown Film
D139FK	1.0	0.918	1000	5000	Yes	Blown Film
D143	1.4	0.916	0	0	Yes	Blown Film
D143FK	1.4	0.916	1000	5000	Yes	Blown Film
D163	0.9	0.914	0	0	Yes	Blown Film
D350	0.9	0.933	0	0	Yes	Blown Film

LDLPE - BLOWN FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
TR-257	0.2	0.923	0	0	No	Heavy Gauge
TR-258	0.2	0.923	0	0	No	Industrial Packaging & Blends

HDPE - BLOWN FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
9656	0.75	0.956	0	0	No	General Purpose Packaging
9659	1.0	0.962	0	0	No	Food & Retail Packaging (WVTR)

MDPE - BLOWN FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
TR-130	0.3	0.937	No	No	No	Food & Retail Packaging
TR-135	0.3	0.937	No	No	No	Heavy Gauge

LDPE - BLOWN FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
1122	2.1	0.920	0	0	No	Industrial Packaging
5335	2.0	0.926	750	2750	No	Food & Retail Packaging
5561	1.3	0.925	0	3000	No	Food & Retail Packaging
5563	1.3	0.925	850	3500	No	Food & Retail Packaging
5613	0.5	0.923	0	6000	No	Industrial Packaging
5619	0.4	0.922	400	1500	No	Industrial Packaging
5628	0.4	0.922	0	1500	No	Industrial Packaging
5754	0.8	0.925	625	2500	No	Food & Retail Packaging
5755	0.8	0.925	0	3000	No	Food & Retail Packaging

Notes: MI = g/10 min, Density = g/cc, Slip/Antiblock = ppm

LLDPE - BLOWN FILM

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
7105D	0.5	0.918	0	0	Yes	Industrial Packaging
7109	0.9	0.918	0	0	No	Blown Film Applications
7109DJ	0.9	0.918	0	2500	Yes	Blown Film Applications
7109DL	0.9	0.918	0	7500	Yes	Blown Film Applications
7109M	0.9	0.918	1600	6500	No	Blown Film Applications
7120X	2.0	0.919	0	0	No	Food & Retail Packaging
7120B	2.0	0.919	1000	0	No	Food & Retail Packaging
7308DK	0.8	0.925	0	3000	Yes	Industrial Packaging
7308DL	0.8	0.925	0	6500	Yes	Industrial Packaging
7308FK	0.8	0.925	1200	3500	Yes	Industrial Packaging

Extrusion Coating & Lamination

With more than 40 years experience in the extrusion coating and lamination industry, Chevron Phillips Chemical is one of the leading North American suppliers of extrusion coating polyolefin products. MarFlex® PE extrusion coating products are designed to meet the challenging processing demands of extrusion coating and are optimized to provide minimal neck-in with maximum draw properties and excellent adhesion to a wide variety of substrates. The products below are our solutions to your extrusion coating application needs.

LDPE - EXTRUSION COATING & LAMINATION

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
1013	13.0	0.917	0	0	No	Medium Drawdown Designed for Med Ct. Wt.
1017	7.0	0.917	0	0	No	Minimal Neck-in Extrusion & Lamination Grade
1018	8.0	0.917	0	0	No	Minimal Neck-in Extrusion & Lamination Grade
1019	16.0	0.917	0	0	No	Maximum Drawdown Designed for Low Ct. Wt.
1023*	13.0	0.917	1500	0	No	General Purpose Ext. Ct. Grade with Slip Additive
4517	5.1	0.923	0	0	No	General Purpose & Board Coating

**modified with slip agents*

HDPE - EXTRUSION COATING & LAMINATION

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
9608XD	8.0	0.962	0	0	Yes	Board Coating & Flexible - HDPE Blend Component
9608	8.0	0.962	0	0	No	Board Coating & Flexible - HDPE Blend Component

LLDPE - EXTRUSION COATING & LAMINATION

PRODUCT	MI	DENSITY	SLIP	ANTIBLOCK	PPA	APPLICATIONS
7235	3.5	0.923	0	0	No	Board Coating & Flexible - LLDPE Blend Component
7235B	3.5	0.923	1000	0	No	Board Coating & Flexible - LLDPE Blend Component

Notes: MI = g/10 min, Density = g/cc, Slip/Antiblock = ppm

Make An mPact™

In addition to a wide variety of traditional film resins, Chevron Phillips Chemical is pleased to offer the mPact™ family metallocene resins. These products combine the characteristically superior strength and sealability of metallocenes with unprecedented optics. mPact™ resins have the lowest haze and highest gloss across a variety of densities compared to other competitive products.

Marlex® Polyethylene

As the innovation leader in polyethylene geomembrane resins, Chevron Phillips Chemical offers a complete portfolio of LLDPE, LDLPE, and MDPE grades designed to meet and exceed the demanding requirements of geomembrane applications.

PREMIUM GEOMEMBRANE RESINS

PRODUCT	MI	DENSITY	TYPE
7104	0.35	0.919	LLDPE
K203	15.0	0.922	LDLPE
K306	12.0	0.937	MPDE
K307	21.0	0.937	MDPE

K-Resin® SBC

K-Resin® SBC, is a high clarity, durable styrene-butadiene copolymer that offers a balance of performance and economics that bridge the gap between expensive, clear engineering polymers and more translucent commodity resins. K-Resin® SBC can be produced into a stiff, high gloss, clear film that offers more application flexibility than traditional cellophane films.

ATTRIBUTES	APPLICATIONS
Easy to Process	Shrink Label Film
Higher Yield than PET or PVC	Tamper Evident Shrink Seals
Inherently Stiff	Shrink Bundling Film
High Thermal Shrinkage	Tinted Decorative Film and Gift Wrap
Exceptional Gloss and Clarity	Produce Bags
Crease Retention	Candy Twist Wraps
Gas Permeability	

Blown Film

K-RESIN® SBC - BLOWN FILM

PRODUCT	MFR	DENSITY	APPLICATIONS
DK11	7.5	1.01	Multilayer Film Applications
KR52	9.0	1.01	Printed/Decorative Films
KR53	10.0	1.01	Good Printing, Clear Tough Packaging
SKR17	Slip/Antiblock Concentrate (Normal addition 2%)		

Notes: K-Resin® SBC MFR (Melt Flow Rate) = g/10 min @ 200°C - 5.0 kg; Density = g/cc

Cast Film

K-RESIN® SBC - CAST FILM

PRODUCT	MFR	DENSITY	SLIP	ANTIBLOCK	APPLICATIONS
DK11	7.5	1.01	0	0	Clear, High Modulus Films
KR52	9.0	1.01	0	0	Shrink Labels
KR53	10.0	1.01	0	0	Clear, Ductile Packaging

Notes: K-Resin® SBC MFR (Melt Flow Rate) = g/10 min @ 200°C - 5.0kg; Density = g/cc, Slip/Antiblock = ppm

Technical Support

Chevron Phillips Chemical provides support to customers using fabrication and lab equipment available in the Bartlesville Technology Center. These resources include fabrication facilities for extrusion coating & laminating, blown film and cast film. This equipment allows our customers to screen various packaging concepts and structures for application development before using valuable commercial production line time. Our equipment is capable of both single-layer and co-extrusion, slitting, and surface treatment. We offer additional laboratory support to our customer base with analytical and physical testing tailored to the packaging industry. Contact your sales or technical service representative for details and scheduling opportunities.

FABRICATION

- Film
  - Blown film (3-layer coextrusion)
  - Cast film (5-layer coextrusion)
- Extrusion Coating & Lamination
  - 1 – 5 layer coextrusion
  - Secondary unwind
  - Various chill roll finishes

TESTING

- Resin
  - Flow
  - Structure
  - Geometry
- Film and coating
  - Optics
  - Surface
  - Barrier
  - Mechanical
  - Strength
  - Structural

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For more information about these and other products, call 800-231-1212.

MSDS and Technical Data Sheets available online at www.cpchem.com