



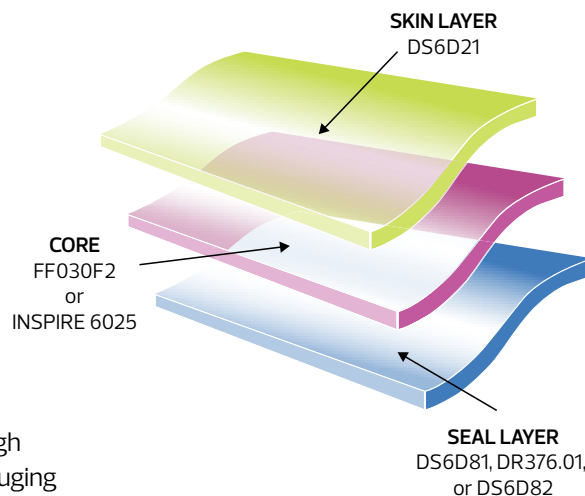
► **Polypropylene for
Film Applications**

Braskem

Surpassing Industry Standards with High Performance, Sustainable Polypropylene

Braskem's broad polypropylene (PP) portfolio meets the needs of today's sophisticated film extrusion applications. Benefits from the proven performance that helps our Clients add value to a wide range of innovative downstream solutions include:

- Film grades designed to be used in core, skin, and seal layers with excellent processability and superior balance of physical properties
- Excellent high ethylene, high clarity random copolymers for heat seal applications
- High melt strength copolymers for blown film applications
- Specialty homopolymers with a broad processing window and high stiffness that allows for down gauging while maintaining impact performance
- Resins with full FDA food contact A-H approval are available



Family	Grade	Melt Flow	Features & Benefits
HOMO	INSPIRE 6025	2.5	Broad processing window, high stiffness material enables down gauging
	INSPIRE 6025N	2.5	Broad processing window, high stiffness material enables down gauging, contains nucleating agent
	FF030F2	3.0	Designed for orientated film applications, provides excellent color and processing stability, superior optical and mechanical properties, broad processing window
	D218	8.0	Provides excellent processing stability, superior optical and mechanical properties in blown and cast films, contains antiblock and nucleating agent
HECO	TI4003F	0.3	Designed for superior balance of stiffness and impact strength, excellent processability, high performance at low temperatures
	INSPIRE 114	0.5	Improved stiffness, heat resistance, puncture strength, and toughness over polyethylene films
	TI4015F	1.6	Designed for superior balance of stiffness and impact strength, excellent processability
	KN501	8.0	Designed for superior balance of stiffness and impact strength, excellent processability
RACO	6D20	1.9	Superior gloss and clarity, low taste and odor transfer
	DS6D81	5.0	Superior optical properties, designed for heat seal applications
	DR376.01	7.0	Excellent processability for cast film with exceptional edge flow and speed, designed for heat seal applications, outstanding catastrophic tear resistance
	DS6D82	7.0	Superior optical properties, designed for heat seal applications
	DS6D21	8.0	Particularly suited for cast film applications requiring high clarity and gloss, designed for metalizing and printing applications



Accelerating Innovation and Speed to Market

Two technologically integrated centers located in Pittsburgh, PA, and Triunfo, RS with more than 300 specialized professionals who work closely with Clients on joint product and applications development. These state-of-the-art facilities feature:

- Pilot-scale equipment that replicates Client production environments for true-to-life polymer testing
- Catalyst labs that develop experimental polymers with enhanced physical properties
- Compounding, film, and sheet applications equipment that create innovative solutions to meet Client needs
- On-site analytical labs that provide tools to understand performance requirements

Braskem America's I&T Capabilities – Pittsburgh, PA

Monolayer Cast Film Line

- 40 mm barrier single screw, 30:1L/D
- 20 lbs/hr throughput
- 16" flex lip die
- 4–40 mil thickness
- 18" diameter cast roll
- Lamination & corona treat

Coextrusion Cast Film

- 20 mm single screw, 25:1L/D
- 5 lbs/hr throughput
- 12" flex lip die
- 0.5 – 20 mil thickness
- Feedblock – A/B/A
- 3 coat-hanger manifolds
- 1:10 layer thickness
- Edge trim

Film Characterization

- Elmendorf Tear
- Coefficient of Friction
- Dart Drop Impact
- Tensile
- Haze/gloss
- Heat seal and seal strength

BOPP Film

- Biaxial film stretching
- 7x7 simultaneous/sequential
- 23 mil max
- Temperatures up to 315°C

Customer-Driven Innovation

We understand the importance of a competitive and dependable supply of high-quality products. Applications often come along that require new levels of performance. Braskem has the capability to provide the technical expertise and innovation that meets your product differentiation requirements.

Braskem is one of the world's leading plastics and chemical companies with 40 industrial plants in Brazil, the United States, Germany and Mexico – the company's newest industrial complex is a joint venture with Idesa, which represents a \$5.2 billion investment.

Braskem is the largest producer of thermoplastic resins in the Americas and the leading producer of biopolymers in the world, creating more environmental-friendly, intelligent and sustainable solutions through chemicals and plastics. Known for innovative solutions such as I'm green Polyethylene™ made from renewable sugarcane and UTEC®, the company's own trademarked Ultra High Molecular Weight Polyethylene for high performance applications, Braskem's products and technologies enable the automotive, packaging, healthcare, and construction industries to produce goods that enhance quality of life for people around the world.

Braskem America is a wholly owned subsidiary of Braskem S.A. headquartered in Philadelphia. The company is the leading producer of polypropylene in the United States, with five production plants located in Texas, Pennsylvania and West Virginia, and an Innovation and Technology Center in Pittsburgh.