m·vera™

B5011

Compostable
Film Grade

Product Bulletin

B5011 for Transparent Film and Bag Applications

Product Description

Mvera™ B5011 is a newly formulated transparent and compostable film grade compound from Metabolix. It has been designed to offer a compostable biopolymer solution for applications where transparency is desired. Combining easy processing on conventional blown film extrusion equipment with durability and excellent melt strength, Mvera B5011 is suitable for a wide range of applications. Potential uses include industrial can liners, retail bags, organics and yard waste collection bags. Mvera B5011 was developed to meet current compostability standards, and is certified compostable by both Vinçotte and BPI.

Coextruded Films and Blends

Mvera B5011 is suitable for use in coextruded films and blends. The material shows good compatibility to other biopolymers such as PHA, PBAT, PLA or PBS. Such formulations can increase the biocontent to greater than 50%, improve barrier properties, and offer attractive economic solutions.

Key Product Features

- Excellent clarity with low haze
- Designed for blown film processing
- Excellent tear and puncture toughness
- Good balance of strength and stiffness
- Excellent seal strength
- Good printability
- Blown film processing similar to LDPE/LLDPE Blends
- Allows significant down gauging
- Supplied dried, ready to use
- Low odor levels
- Free of BPA and phthalates

About Metabolix

Metabolix, Inc. is an advanced biomaterials company that is well positioned to address growing market demand for sustainable solutions in the plastics, chemicals and energy industries. Metabolix is headquartered in Cambridge, Massachusetts, and was founded in 1992 by researchers associated with MIT. Metabolix operates offices, customer support functions, R&D laboratories and warehouses at locations in the USA and Europe for the development, marketing and sales of Mirel and Mvera™, a family of high-performance bioplastics which includes biobased and biodegradable alternatives to many petroleum-based plastics. Metabolix customers have used Mirel and Mvera in a broad range of applications utilizing the biobased content and the biodegradation profiles of the biopolymers. Metabolix has established an industry-leading intellectual property portfolio and holds more than 500 granted or pending patents.

Metabolix®

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Typical Properties of Mvera B5011

	Method	Unit	Mvera B5011	
Density	ISO 1183	g/cm³	1.23	
MFR 190°C, 2.16 Kg	ISO 1133	g/10 min	3.0	
Haze	ASTM D1003		16%	
Flexural Modulus	ISO 178	MPa	103	
	ASTM D770	kpsi	14.9	
Dart Impact	ISO 7765-1	N/mm	40	
	ASTM D1709	g/mil	100	
			MD	TD
Tear	ISO 638-2	N/mm	39	71
	ASTM D1922	g/mil	100	182
Tensile Modulus	ISO 527-3	MPa	249	196
	ASTM D882	kpsi	36.1	28.4
Tensile Strength	ISO 527-3	MPa	33.4	17.6
	ASTM D882	kpsi	4.84	2.55
Tensile Elongation	ISO 527-3	%	295	620
	ASTM D882	%	295	620

* Reported blown film properties are based on 25 micron (1.0 mil) thick film made using the following equipment and conditions:
(1) 38 mm Killion single-screw extruder fitted with a spiral-mandrel die, 1.52 mm die gap and dual-lip air ring.
(2) Temp-Profile. Extruder: 170/165/165/165/165[°C]; All Die Zones: 170 °C.
(3) Screw RPM = 40.
(4) Blow-Up Ratio ~ 2.6; Draw Down Ratio ~ 23; MD = Machine Direction, TD = Transverse Direction; Flexural modulus measured on compression molded ⅛" x ¼" ASTM specimens.

**These results are not specifications for Mvera B5011, and were generated by Metabolix.

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Combining bioscience and engineering to bring innovative bioplastics solutions to the world.