DOW™ LDPE 505I

The Dow Chemical Company - Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

DOW LDPE 505I Resin is a barefoot grade for general purpose blown film applications.

Main Characteristics:

- Blown film extrusion
- Pellet form

Complies with:

- U.S. FDA, 21 CFR 177.1520(c)2.1
- Europe EU No. 10/2011
- Consult the regulations for complete details.

General			
Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• EU No 10/2011	• FDA 21 CFR 177.1520(c) 2.1	
Forms	• Pellets		
Processing Method	• Blown Film		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.926		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	2.1	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	2	mil	
Film Puncture Energy	12.4	in·lb	Internal Method
Film Puncture Resistance	43.5	ft·lb/in³	Internal Method
Film Toughness - MD	580	ft·lb/in³	ASTM D882
Film Toughness - TD	641	ft·lb/in³	ASTM D882
Secant Modulus - 2% Secant, MD	25700	psi	ASTM D882
Secant Modulus - 2% Secant, TD	30500	psi	ASTM D882
Tensile Strength - MD (Yield)	1520	psi	ASTM D882
Tensile Strength - TD (Yield)	1530	psi	ASTM D882
Tensile Strength - MD (Break)	3050	psi	ASTM D882
Tensile Strength - TD (Break)	2120	psi	ASTM D882
Tensile Elongation - MD (Break)	280	%	ASTM D882
Tensile Elongation - TD (Break)	500	%	ASTM D882
Dart Drop Impact	100	g	ASTM D1709A
Elmendorf Tear Strength - MD [2]	460	g	ASTM D1922
Elmendorf Tear Strength - TD [2]	320	g	ASTM D1922
Thermal	**Nominal Value**	**Unit**	**Test Method**
Melting Temperature (DSC)	228	°F	Internal Method

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Optical	Nominal Value	Unit	Test Method
Gloss (45°)	78		ASTM D2457
Haze	5.90	%	ASTM D1003

Processing Information

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 3.5 in. (88.9 mm), 30:1 L/D
- Die Gap: 70 mil (1.78mm)
- Melt Temperature: 387°F (197°C)
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 50.5 rpm
- Frost Line Height: 38 in. (965 mm)

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] Method B