Technical Information

DOWLEX™ 5075G
Polyethylene Resin

Overview

DOWLEX 5075G Polyethylene Resin is a blown film extrusion linear low density polyethylene resin grade suitable for high toughness and clarity film applications..

Main Characteristics:
- Linear Low Density Polyethylene/Octene Copolymer
- For high performance film applications

Complies with:
- U.S. FDA FCN 424.

Consult the regulations for complete details.

Additive
- Antiblock: No
- Slip: No
- Processing Aid: No

Physical	Nominal Value (English)		Nominal Value (SI)		Test Method
Density	0.917	g/cm³	0.917	g/cm³	ASTM D792
Base Density [1]	0.917	g/cm³	0.917	g/cm³	Dow Method
Melt Index (190°C/2.16 kg)	1.3	g/10 min	1.3	g/10 min	ASTM D1238
Films	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Film Thickness - Tested	1.0	mil	25	µm	
Film Puncture Energy	43.9	in·lb	4.96	J	Dow Method
Film Puncture Force	12.8	lbf	56.8	N	Dow Method
Film Puncture Resistance	272	ft·lb/in³	22.5	J/cm³	Dow Method
Film Toughness					ASTM D882
MD	1140	ft·lb/in³	94.6	J/cm³	
TD	1110	ft·lb/in³	92.1	J/cm³	
Secant Modulus					ASTM D882
1% Secant, MD	26900	psi	185	MPa	
2% Secant, MD	22400	psi	154	MPa	
1% Secant, TD	31800	psi	219	MPa	
2% Secant, TD	26800	psi	185	MPa	
Tensile Strength					ASTM D882
MD : Yield	1610	psi	11.1	MPa	
TD : Yield	1590	psi	11.0	MPa	
MD : Break	6420	psi	44.3	MPa	
TD : Break	5010	psi	34.6	MPa	
Tensile Elongation					ASTM D882
MD : Break	510	%	510	%	
TD : Break	590	%	590	%	
Dart Drop Impact	400	g	400	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD	450	g	450	g	
TD	590	g	590	g	
Thermal	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Melting Temperature (DSC)	244	°F	118	°C	Dow Method
Optical	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Gloss (45°)	64		64		ASTM D2457
Haze	7.51	%	7.51	%	ASTM D1003

Extrusion	Nominal Value (English)		Nominal Value (SI)	
Melt Temperature	416	°F	213	°C

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Extrusion Notes

Fabrication Conditions For Blown Film:

- Die Size: 8 in.
- Screw Type: DSB II
- Die Gap: 70mil (1.8 mm)
- Melt Temperature: 416°F (223°C)
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 44.3 rpm
- Frost Line Height: 45 in.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

[1] Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

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