



Technical Data Sheet

DOWLEX™ 2685G Polyethylene Resin

Overview

DOWLEX™ 2685G Linear Low Polyethylene Resin is designed for the production of a wide variety of film applications. Films made from this resin exhibit a combination of good toughness and tear resistance.

Compliance

Complies with:

- U.S. FDA FCN 741
- Canadian HPFB No Objection
- EU, No 10/2011

Consult the regulations for complete details.

Additive

- Antiblock: 5100 ppm
- Slip: 917 ppm
- Processing aid: No

Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ¹
Density	0.920	g/cm ³	0.920	g/cm ³	ASTM D792
Base Density ²	0.917	g/cm ³	0.917	g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	0.75	g/10 min	0.75	g/10 min	ASTM D1238
Films	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Film Thickness – Tested	1	mil	25	µm	
Film Puncture Energy	41.0	in•lb	4.63	J	
Film Puncture Force	14.0	ft-lb/in ³	20.4	J/cm ³	
Film Toughness					ASTM D882
MD	1610	ft-lb/in ³	133	J/cm ³	
TD	1600	ft-lb/in ³	132	J/cm ³	
Secant Modulus					ASTM D882
1% Secant, MD	23300	psi	160	MPa	
2% Secant, MD	19400	psi	133	MPa	
1% Secant, TD	26500	psi	183	MPa	
2% Secant, TD	21400	psi	147	MPa	

1. ASTM: American Society for Testing and Materials

2. 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.

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



Properties (Cont.)

Films	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Tensile Strength					ASTM D882
MD: Yield	1630	psi	11.2	MPa	
TD: Yield	1620	psi	11.2	MPa	
MD: Break	8160	psi	56.3	MPa	
TD: Break	6870	psi	47.3	MPa	
Tensile Elongation					ASTM D882
MD: Break	610	%	610	%	
TD: Break	690	%	690	%	
Dart Drop Impact	630	g	630	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD	400	g	400	g	
TD	520	g	520	g	
Thermal	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Vicat Softening Temperature	216	°F	102	°C	ASTM D1525
Melting Temperature (DSC)	246	°F	119	°C	Dow Method
Optical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Gloss (45°)	47		47		ASTM D2457
Haze	16.0	%	16.0	%	ASTM D1003

Extrusion Notes

Fabrication Conditions for Blown Film:

- Die Size: 8 in.
- Screw Type: DSB II
- Die Gap: 70 mil
- Melt Temperature: 437°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 39 rpm
- Frost Line Height: 43 in.

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