



Technical Data Sheet

DOWLEX™ TG 2085B Polyethylene Resin

Overview

DOWLEX™ TG 2085B Polyethylene Resin is a linear low density polyethylene, copolymer octene, produced in the Solution Process. This resin presents an excellent balance of optical and mechanical properties. It offers downgauging, increases in productivity and packing speed.

Main Characteristics:

- For high speed, thin film applications
- Additional thermal stability

Complies with:

- U.S. FDA 21 177 1520 (c) 3.2a
- Consult the regulations for complete details.

Additive

- Antiblock: 2500 ppm
- Slip: 1000 ppm
- Processing aid: No

Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ¹
Density	0.919	g/cm ³	0.919	g/cm ³	ASTM D792
Base Density ²	0.918	g/cm ³	0.918	g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	0.95	g/10 min	0.95	g/10 min	ASTM D1238
Films					
Film Thickness - Tested	1	mil	38	µm	
Film Puncture Resistance (1.5 mil (38 µm))	109	ft-lb/in ³	9.02	J/cm ³	Dow Method
Secant Modulus					ASTM D882
2% Secant, MD : 1.5 mil (38 µm)	24700	psi	170	MPa	
2% Secant, TD : 1.5 mil (38 µm)	30500	psi	210	MPa	
Tensile Strength					ASTM D882
MD : Yield, 1.5 mil (38 µm)	1450	psi	10.0	MPa	
TD : Yield, 1.5 mil (38 µm)	1450	psi	10.0	MPa	
MD : Break, 1.5 mil (38 µm)	5370	psi	37.0	MPa	
TD : Break, 1.5 mil (38 µm)	4640	psi	32.0	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 Elongation					ASTM D882
MD : Break, 1.5 mil (38 pm)	830	%	830	%	
TD : Break, 1.5 mil (38 pm)	990	%	990	%	
Dart Drop Impact (1.5 mil (38 pm))	360	g	360	g	ASTM D1709A
Elmendorf Tear Strength ³					ASTM D1922
MD : 1.5 mil (38 pm)	700	g	700	g	
TD : 1.5 mil (38 pm)	920	g	920	g	
Optical					
Gloss (45°, 1.48 mil (37.5 pm))	57		57		ASTM D2457
Haze (1.48 mil (37.5 pm))	12.0	%	12.0	%	ASTM D1003
Extrusion					
Melt Temperature	423	°F	217	°C	
Extrusion Notes					
Fabrication Conditions for Blown Film:					
- Screw Size: 2.3 in. (60 mm); 32:1 ratio L/D - Die Gap: 70 mil (1.8 mm) - Melt Temperature: 423°F (217°C) - Output: 46.9 Kg/h - Die Diameter: 5.9 in. (150 mm) - Blow-up Ratio: 2.5:1 - Screw Speed: 60 rpm - Frost Line Height: 19.7 in. (50 cm)					

3. Method B

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