



Technical Data Sheet

ELITE™ 5940G Enhanced Polyethylene Resin

Overview

ELITE™ 5940G Enhanced Polyethylene Resin is a copolymer produced via INSITE™ Technology from Dow.

Main Characteristics:

- MDPE with excellent balance of stiffness and toughness.
- Excellent processability.

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 3.2a
- Canadian HPFB No Objection

Consult the regulations for complete details

Sustainability Attribute:



Additive

- Antiblock: No
- Slip: No
- Processing aid: No

Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ¹
Density	0.940	g/cm ³	0.940	g/cm ³	ASTM D792
Base Density ²	0.940	g/cm ³	0.940	g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	0.85	g/10 min	0.85	g/10 min	ASTM D1238
Films					
Film Thickness - Tested	1	mil	25	µm	
Film Puncture Energy	17.0	in·lb	1.92	J	
Film Puncture Force	10.0	lbf	44.5	N	
Film Puncture Resistance	115	ft·lb/in ³	9.51	J/cm ³	Dow Method

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.



Physical Properties (Cont.)

Films	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Film Toughness					ASTM D882
MD	1300	ft·lb/in ³	108	J/cm ³	
TD	1500		124		
Secant Modulus					ASTM D882
1% Secant, MD	90700	psi	625	MPa	
2% Secant, MD	73000	psi	503	MPa	
1% Secant, TD	110000	psi	758	MPa	
2% Secant, TD	88000	psi	607	MPa	
Tensile Strength					ASTM D882
MD : Yield	3000	psi	20.7	MPa	
TD : Yield	3500	psi	24.1	MPa	
MD : Break	5200	psi	35.9	MPa	
TD : Break	4700	psi	32.4	MPa	
Tensile Elongation					ASTM D882
MD : Break	460	%	460	%	
TD : Break	640	%	640	%	
Dart Drop Impact	120	g	120	g	ASTM D1709B
Elmendorf Tear Strength ³					ASTM D1922
MD	40	g	40	g	
TD	650	g	650	g	
Thermal					
Vicat Softening Temperature	252	°F	122	°C	ASTM D1525
Melting Temperature (DSC)	259	°F	126	°C	Dow Method
Optical					
Gloss (45°)	20		20		ASTM D2457
Haze	30.0	%	30.0	%	ASTM D1003

Extrusion Notes

Fabrication Conditions for Blown Film:

- Screw Size: 35 in.
- Screw Type: DSB II
- Die Gap: 70 mil (1.7 mm)
- Melt Temperature: 395°F
- Output: 10 lb/hr/in of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 39 rpm
- Frost Line Height: 30 in.

3. Method B



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