



Technical Data Sheet

ELITE™ 5940ST Enhanced Polyethylene Resin

Overview

ELITE™ 5940ST Polyethylene Resin is a copolymer produced via INSITE™ Technology from Dow. It offers a unique combination of excellent stiffness/toughness balance, good tear strength and an outstanding processability, allowing for the production of a variety of downgauged films at high output rates.

Sustainability Attribute:



Main Characteristics:

- Outstanding processability
- Excellent stiffness/toughness balance

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 3.2a
- EU, No 10/2011

Consult the regulations for complete details.

Additive

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

Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method ¹
Density	0.941	g/cm ³	0.941	g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	0.80	g/10 min	0.80	g/10 min	ASTM D1238
Films					
Film Thickness — Tested	2	mil	51	µm	
Secant Modulus					ASTM D882
2% Secant, MD: 2.0 mil (51 µm)	63100	psi	435	MPa	
2% Secant, TD: 2.0 mil (51 µm)	62700	psi	432	MPa	

1. ASTM: American Society for Testing and Materials

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
Tensile Strength					
MD: Yield, 2.0 mil (51 µm)	2810	psi	19.4	MPa	ASTM D882
TD: Yield, 2.0 mil (51 µm)	2940	psi	20.3	MPa	
MD: Break, 2.0 mil (51 µm)	4090	psi	28.2	MPa	
TD: Break, 2.0 mil (51 µm)	3760	psi	25.9	MPa	
Tensile Elongation					
MD: Break, 2.0 mil (51 µm)	540	%	540	%	ASTM D882
TD: Break, 2.0 mil (51 µm)	600	%	600	%	
Dart Drop Impact (2.0 mil (51 µm))	280	g	280	g	ASTM D1709A
Elmendorf Tear Strength					
MD: 2.0 mil (51 µm) ¹	120	g	120	g	ASTM D1922
TD: 2.0 mil (51 µm) ²	570	g	570	g	
Thermal					
Vicat Softening Temperature	253	°F	123	°C	ASTM D1525
Melting Temperature (DSC)	257	°F	125	°C	Dow Method
Optical					
Gloss (45°, 2.00 mil (50.8 µm))	24		24		ASTM D2457
Haze (2.00 mil (50.8 µm))	30.0	%	30.0	%	ASTM D1003
Extrusion Notes					
Fabrication Conditions for Blown Film:					
<ul style="list-style-type: none"> • Screw Size: 2.5 in. (63.5 mm); 30:1 ratio L/D • Screw Type: DSBII • Die Gap: 70 mil (1.8 mm) • Melt Temperature: 442°F (228°C) • Output: 7.5 lb/hr/in. of die circumference • Die Diameter: 6 in. • Blow-Up Ratio: 2.5 to 1 • Screw Speed: 85.3 rpm • Frost Line Height: 30 in. (762 mm) 					

2. Method B
3. Method A

