

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.

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	Nominal Value (English)	Nominal Value (SI)	Test Method
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	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2.0 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	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (51 µm)	2810 psi	19.4 MPa	
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			ASTM D882
MD : Break, 2.0 mil (51 µm)	540 %	540 %	
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			ASTM D1922
MD : 2.0 mil (51 µm) ¹	120 g	120 g	
TD : 2.0 mil (51 µm) ²	570 g	570 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	253 °F	123 °C	ASTM D1525
Melting Temperature (DSC)	257 °F	125 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 2.00 mil (50.8 µm))	24	24	ASTM D2457
Haze (2.00 mil (50.8 µm))	30 %	30 %	ASTM D1003



Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5in. (63.5mm); 30:1ratio L/D
- Screw Type: DSBII
- Die Gap: 70mil (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. (762mm)

Notes

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

¹ Method B

² Method A

