

ELITE™ 5940ST

Enhanced Polyethylene Resin

The Dow Chemical Company

Message:

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.

General Information			
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
	Europe No 10/2011		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.941	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	51	µm	
secant modulus			ASTM D882
2% secant, MD: 51 µm	435	MPa	ASTM D882
2% secant, TD: 51 µm	432	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 51 µm	19.4	MPa	ASTM D882
TD: Yield, 51 µm	20.3	MPa	ASTM D882
MD: Fracture, 51 µm	28.2	MPa	ASTM D882
TD: Fracture, 51 µm	25.9	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Fracture, 51 µm	540	%	ASTM D882
TD: Fracture, 51 µm	600	%	ASTM D882
Dart Drop Impact (51 µm)	280	g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 51 µm ¹	120	g	ASTM D1922
TD : 51 µm ²	570	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	123	°C	ASTM D1525

Melting Temperature (DSC)	125	°C	Internal method
Optical	Nominal Value	Unit	Test Method
Gloss (45°, 50.8 µm)	24		ASTM D2457
Haze (50.8 µm)	30	%	ASTM D1003

Extrusion instructions

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)

NOTE

1. Method B
2. Method A

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