



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:					
<ul style="list-style-type: none"> 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

Product Stewardship

The Dow Chemical Company and its subsidiaries ("Dow") has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Dow products — from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

Medical Applications Policy

NOTICE REGARDING MEDICAL APPLICATION RESTRICTIONS: Dow will not knowingly sell or sample any product or service ("Product") into any commercial or developmental application that is intended for:

- a. long-term or permanent contact with internal bodily fluids or tissues. "Long-term" is contact which exceeds 72 continuous hours;
- b. use in cardiac prosthetic devices regardless of the length of time involved ("cardiac prosthetic devices" include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass-assisted devices);
- c. use as a critical component in medical devices that support or sustain human life; or
- d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction

Dow requests that customers considering use of Dow products in medical applications notify Dow so that appropriate assessments may be conducted. Dow does not endorse or claim suitability of its products for specific medical applications. It is the responsibility of the medical device or pharmaceutical manufacturer to determine that the Dow product is safe, lawful, and technically suitable for the intended use. **DOW MAKES NO WARRANTIES, EXPRESS OR IMPLIED, CONCERNING THE SUITABILITY OF ANY DOW PRODUCT FOR USE IN MEDICAL APPLICATIONS**

dow.com

NOTICE: No freedom from infringement of any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. **NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

NOTICE: If products are described as "experimental" or "developmental": (1) product specifications may not be fully determined; (2) analysis of hazards and caution in handling and use are required; (3) there is greater potential for Dow to change specifications and/or discontinue production; and (4) although Dow may from time to time provide samples of such products, Dow is not obligated to supply or otherwise commercialize such products for any use or application whatsoever.

NOTICE: This data is based on information Dow believes to be reliable, as demonstrated in controlled laboratory testing. They are offered in good faith, but without guarantee, as conditions and method of use of Dow products are beyond Dow's control. Dow recommends that the prospective user determine the suitability of these materials and suggestions before adopting them on a commercial scale.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability for the accuracy and completeness of such information.

This document is intended for use within North America.

