



DOW™ LDPE 692 LDPE HEALTH+™ Low Density Polyethylene Resin

Overview

DOW™ LDPE 692 HEALTH+™ is a Low Density Polyethylene barefoot resin designed for extrusion blow molding, injection blow molding, and blow-fill seal applications with good flexibility, moderate rigidity and good chemical resistance. It is also suitable for medical packaging films.

Main Characteristics:

- Good flexibility
- Good chemical resistance
- Good stiffness

Complies with:

- U.S. FDA 21CFR 177.1520 (c) 2.1
- USP XXIII Class VI
- Drug Master File Listing

Consult the regulations for complete details.

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.922 g/cm ³	0.922 g/cm ³	ASTM D792
Base Density ¹	0.922 g/cm ³	0.922 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	0.75 g/10 min	0.75 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	2 mil	51 µm	
Film Puncture Resistance (2.0 mil (51 µm))	60.0 ft·lb/in ³	4.96 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD : 2.0 mil (51 µm)	2380 ft·lb/in ³	197 J/cm ³	
TD : 2.0 mil (51 µm)	2550 ft·lb/in ³	211 J/cm ³	
Tensile Strength			ASTM D882
MD : Yield, 2.0 mil (51 µm)	1830 psi	12.6 MPa	
TD : Yield, 2.0 mil (51 µm)	1660 psi	11.4 MPa	
MD : Break, 2.0 mil (51 µm)	4310 psi	29.7 MPa	
TD : Break, 2.0 mil (51 µm)	4120 psi	28.4 MPa	
Tensile Elongation			ASTM D882
MD : Break, 2.0 mil (51 µm)	480 %	480 %	
TD : Break, 2.0 mil (51 µm)	680 %	680 %	
Dart Drop Impact (2.0 mil (51 µm))	150 g	150 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD : 2.0 mil (51 µm)	280 g	280 g	
TD : 2.0 mil (51 µm)	350 g	350 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	208 °F	97.8 °C	ASTM D1525
Melting Temperature (DSC)	234 °F	112 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 2.00 mil (50.8 µm))	70	70	ASTM D2457
Haze (2.00 mil (50.8 µm))	8.60 %	8.60 %	ASTM D1003
Extrusion	Nominal Value (English)	Nominal Value (SI)	
Melt Temperature	446 °F	230 °C	

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm); 24:1 L/D
- Screw Type: Single Flight Double Mix
- Die Gap: 40 mil (1.0 mm)
- Melt Temperature: 446 °F (230 °C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 88 rpm
- Frost Line Height: 23.5 in. (597 mm)

Notes

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

¹ 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.

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