Technical Information

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/cm³	0.922	g/cm³	ASTM D792
Base Density [1]	0.922	g/cm³	0.922	g/cm³	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/in³	4.96	J/cm³	Dow Method
Film Toughness					ASTM D882
MD : 2.0 mil (51 µm)	2380	ft·lb/in³	197	J/cm³	
TD : 2.0 mil (51 µm)	2550	ft·lb/in³	211	J/cm³	
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.