DOW™ HDPE DGDP-6097 NT 7
High Density Polyethylene Resin

Overview

Dow DGDP-6097 NT 7 High Density Polyethylene Resin is a medium molecular weight, high-density polyethylene copolymer that has been designed specifically for tubular film extrusion. Its broad molecular weight distribution and density successfully combine excellent performance at high extrusion rates with high film strength and rigidity. Tubular films of Dow DGDP-6097 NT 7 Resin are recommended for high-strength grocery sacks, shopping bags and notion and millinery bags. The excellent drawdown characteristic of this product permits production of high-quality thin films for multiwall sack liners and replacements for thin paper products. The combination of strength and drawdown makes this resin ideal for downgauging in many applications. Films are readily treated and printed to give high-quality graphics. Dow DGDP-6097 NT 7 Resin is compatible with color concentrates, thus permitting the production of a variety of colored films that serve as protective and attractive decorative wraps.

Main Characteristics:

- Hexene High Density Resin
- High film strength
- Excellent drawdown
- Complies with U.S. FDA U.S. FDA 21 CFR 177.1520(c) 3.2a (with Restrictions)
- Complies with EU, No 10/2011
- Consult the regulations for complete details.

Additive

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

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	0.948	g/cm³	0.948	g/cm³	ASTM D792
Base Density [1]	0.948	g/cm³	0.948	g/cm³	Dow Method
Melt Index (190°C/21.6 kg)	11	g/10 min	11	g/10 min	ASTM D1238
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flexural Modulus - 1% Secant	118000	psi	814	MPa	ASTM D790
Films	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Film Thickness - Tested	1	mil	13	µm	
Film Puncture Energy	10.6	in·lb	1.20	J	Dow Method
Tensile Strength					ASTM D882
MD : Yield, 0.50 mil (13 µm)	4000	psi	27.6	MPa	
TD : Yield, 0.50 mil (13 µm)	3500	psi	24.1	MPa	
MD : Break, 0.50 mil (13 µm)	8000	psi	55.2	MPa	
TD : Break, 0.50 mil (13 µm)	7800	psi	53.8	MPa	
Tensile Elongation					ASTM D882
MD : Break, 0.50 mil (13 µm)	270	%	270	%	
TD : Break, 0.50 mil (13 µm)	350	%	350	%	
Dart Drop Impact (0.50 mil (13 µm))	150	g	150	g	ASTM D1709A
Elmendorf Tear Strength [2]					ASTM D1922
MD : 0.50 mil (13 µm)	70	g	70	g	
TD : 0.50 mil (13 µm)	150	g	150	g	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Vicat Softening Temperature	256	°F	124	°C	ASTM D1525
Melting Temperature (DSC)	269	°F	132	°C	Dow Method

Extrusion	Nominal Value	(English)	Nominal Value	(SI)
Melt Temperature	420	°F	216	°C

Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5mm); 30:1ratio L/D
- Screw Type: Grooved
- Die Gap: 40 mil (1 mm)
- Melt Temperature:420°F (215°C)
- Output: 6 lb/hr/in. of die circumference
- Die Diameter: 4 in.
- Blow-Up Ratio: 4 to 1
- Screw Speed: 80 rpm
- Frost Line Height: 30 in. (760 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.

[2] Method B