



DOW™ LLDPE DFDC-7059 NT 7

Linear Low Density Polyethylene Resin

Overview

DOW DFDC-7059 NT 7 Linear Low Density Polyethylene Resin is an ethylene-butene copolymer which is supplied in pelleted form with a TNPP (Tris nonylphenyl phosphite) free antioxidant package. It is generally recommended for slot cast thin film applications requiring both clarity and toughness. It is excellent in coextruded, slot cast stretch wrap. This resin is also suitable for use in hose and tube applications.

Main Characteristics:

- High clarity
- High tensile strength
- High elongation
- Good puncture resistance

Complies with:

- U.S. FDA 21 CFR 177.1520(c) 3.2a
- EU, No 10/2011

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density ¹	0.918 g/cm ³	0.918 g/cm ³	ASTM D792
Base Density ²	0.918 g/cm ³	0.918 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	2.0 g/10 min	2.0 g/10 min	ASTM D1238
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength ³			ASTM D638
Yield	1380 psi	9.51 MPa	
Break	1490 psi	10.3 MPa	
Tensile Elongation ³			ASTM D638
Yield	11 %	11 %	
Break	570 %	570 %	
Flexural Modulus - 2% Secant ³	32000 psi	221 MPa	ASTM D790B
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1.0 mil	25 µm	
Tensile Strength			ASTM D882
MD : Break, 1.0 mil (25 µm), Cast Film	5000 psi	34.5 MPa	
TD : Break, 1.0 mil (25 µm), Cast Film	3600 psi	24.8 MPa	
Tensile Elongation			ASTM D882
MD : Break, 1.0 mil (25 µm), Cast Film	450 %	450 %	
TD : Break, 1.0 mil (25 µm), Cast Film	850 %	850 %	
Dart Drop Impact			ASTM D1709A
1.0 mil (25 µm), Cast Film	70 g	70 g	
Elmendorf Tear Strength			ASTM D1922
MD : 1.0 mil (25 µm), Cast Film	50 g	50 g	
TD : 1.0 mil (25 µm), Cast Film	400 g	400 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Melting Temperature (DSC)	257 °F	125 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°, 1.00 mil (25.4 µm), Cast Film)	92	92	ASTM D2457
Haze (1.00 mil (25.4 µm), Cast Film)	2.50 %	2.50 %	ASTM D1003

Additional Information

Film properties are typical of slot-cast film extruded at 520°F (270°C).

Extrusion	Nominal Value (English)	Nominal Value (SI)
Melt Temperature	520 °F	271 °C

Extrusion Notes

Fabrication Conditions For Cast Film:

- Extrudable by conventional slot cast film extrusion equipment with only minor machine modifications necessary for optimum use.
- Melt Temperature: 520°F (270°C)

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

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.

³ Plaque molded and tested in accordance with ASTM D4976.

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