Technical Data Sheet

DOW™ LLDPE DFDF-7047 NT7 Linear Low Density Polyethylene

Overview

DOW™ DFDF-7047 NT7 Linear Low Density Polyethylene is an ethylene-butene copolymer designed for blown film applications. This resin is formulated without TNPP (Tris-nonylphenyl Phosphite) antioxidant.

Main Characteristics

- Butene linear low density polyethylene
- Blown film extrusion
- Pellet form

Complies with

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

Consult the regulations for complete details.

Typical Properties[1]

Physical	Nominal Value (SI)	Unit	Test Method[2]
Density	0.918	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films			
Film Thickness-Tested	25	µm	
Film Puncture Energy	2.49	J	Internal Method
Film Puncture Force	35.6	N	Internal Method
Film Puncture Resistance	12.0	J/cm³	Internal Method
Film Toughness-MD	96.8	J/cm³	ASTM D882
Film Toughness-CD	95.1	J/cm³	ASTM D882
Secant Modulus			ASTM D882
1% Secant- MD	221	MPa	
2% Secant- MD	189	MPa	
Secant Modulus			ASTM D882
1% Secant- CD	248	MPa	
2% Secant- CD	210	MPa	

1. These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.
2. ASTM: American Society for Testing and Materials

Typical Properties (Cont.)

Films	Nominal Value (SI)	Unit	Test Method[2]
Tensile Strength-MD (Yield)	10.7	MPa	ASTM D882
Tensile Strength-CD (Yield)	11.0	MPa	ASTM D882
Tensile Strength-MD (Break)	36.5	MPa	ASTM D882
Tensile Strength-CD (Break)	26.9	MPa	ASTM D882
Tensile Elongation-MD (Break)	580	%	ASTM D882
Tensile Elongation-CD (Break)	690	%	ASTM D882
Dart Drop Impact	90	g	ASTM D1709A
Elmendorf Tear Strength-MD[3]	170	g	ASTM D1922
Elmendorf Tear Strength-TD[3]	320	g	ASTM D1922
Thermal			
Vicat Softening Temperature	102	°C	ASTM D1525
Melting Temperature (DSC)	121	°C	ISO[4] 3146
Optical			
Gloss (45°)	33		ASTM D2457
Haze	19.0	%	ASTM D1003
Extrusion Notes:			

Fabrication Conditions for Blown Film:

- Screw Size: 3.5 in.; 30:1 ratio L/D
- Screw Type: DSB II
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 420°F
- Output: 12 lb/hr/in. of die circumference
- Die Diameter: 8 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 39 rpm
- Frost Line Height: 51 in.

3. Method B
4. ISO: International Standardization Organization