



FLEXOMER™ ETS-9066 NT 7

Very Low Density Polyethylene Resin

Overview

FLEXOMER™ ETS-9066 NT 7 Very Low Density Polyethylene (VLDPE) Resin is intended for use in single or multi-layer blown-film constructions or thick sheets. Films extruded from ETS- 9066 NT 7 have a high tear strength, high impact strength, and high puncture resistance and are readily heat sealable. Addition of slip and antiblock agents should be considered for most applications.

- Excellent strength and toughness balance
- Flexible over wide temperature range
- Superior low temperature properties
- Broad sealing temperature range
- Complies with U.S. FDA 21 CFR 177.1520 (c) 3.1a (with restrictions)
- An additive present in this product limits use only in film form for food contact applications.
- Consult the regulations for complete details.

Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.905 g/cm ³	0.905 g/cm ³	ASTM D792
Base Density ¹	0.905 g/cm ³	0.905 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	0.50 g/10 min	0.50 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1.0 mil	25 µm	
Film Puncture Energy	40.0 in·lb	4.52 J	Dow Method
Film Puncture Force	12.0 lbf	53.4 N	Dow Method
Film Puncture Resistance	360 ft·lb/in ³	29.8 J/cm ³	Dow Method
Film Toughness			
MD	570 ft·lb/in ³	47.2 J/cm ³	ASTM D892
TD	720 ft·lb/in ³	59.6 J/cm ³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	18800 psi	130 MPa	
2% Secant, MD	16300 psi	112 MPa	
1% Secant, TD	18700 psi	129 MPa	
2% Secant, TD	15900 psi	110 MPa	
Tensile Strength			ASTM D882
MD : Yield	1000 psi	6.89 MPa	
TD : Yield	900 psi	6.21 MPa	
MD : Break	4940 psi	34.1 MPa	
TD : Break	3740 psi	25.8 MPa	
Tensile Elongation			ASTM D882
MD : Break	330 %	330 %	
TD : Break	560 %	560 %	
Dart Drop Impact	870 g	870 g	ASTM D1709B
Elmendorf Tear Strength			ASTM D1922
MD	270 g	270 g	
TD	440 g	440 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	190 °F	87.8 °C	ASTM D1525
Melting Temperature (DSC)	210 °F	99.0 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	48	48	ASTM D2457
Haze	11 %	11 %	ASTM D1003



Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 2.5 in. (63.5 mm); 30:1 L/D
- Screw Type: DSBII
- Die Gap: 70 mil (1.8mm)
- Melt Temperature: 416°F (213 °C)
- Output: 10 lb/hr/in. of die circumference
- Die Diameter: 6 in.
- Blow-Up Ratio: 2.5:1
- Screw Speed: 59 rpm
- Frost Line Height: 30 in. (762 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.

