Technical Information

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/cm³	0.905	g/cm³	ASTM D792
Base Density [1]	0.905	g/cm³	0.905	g/cm³	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/in³	29.8	J/cm³	Dow Method
Film Toughness					
MD	570	ft·lb/in³	47.2	J/cm³	ASTM D892
TD	720	ft·lb/in³	59.6	J/cm³	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.