



## TUFLIN™ HS-7028 NT 7 Linear Low Density Polyethylene Resin

### Overview

TUFLIN™ HS-7028 NT 7 Linear Low Density Polyethylene Resin is an ethylene-hexene copolymer, linear low density (LLDPE) resin designed for good strength and processability. This product is recommended for general purpose packaging applications from thick gauge, heavy duty bags to high speed thin gauge applications

- Hexene Linear Low Density Resin
- General Purpose Resin
- Excellent Strength
- An additive present in this product limits use only in film form for food contact applications.

Complies with:

- U.S. FDA 21 CFR 177.1520 (c) 3.1a (with Restrictions)
- European Commission Regulation (EU) No 10/2011

Consult the regulations for complete details.

### Additive

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

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.918 g/cm <sup>3</sup>	0.918 g/cm <sup>3</sup>	ASTM D792
Base Density <sup>1</sup>	0.918 g/cm <sup>3</sup>	0.918 g/cm <sup>3</sup>	Dow Method
Melt Index (190°C/2.16 kg)	1.0 g/10 min	1.0 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1 mil	25 μm	Dow Method
Film Puncture Energy	40.0 in·lb	4.52 J	Dow Method
Film Puncture Force	11.0 lbf	48.9 N	Dow Method
Film Puncture Resistance	300 ft·lb/in <sup>3</sup>	24.8 J/cm <sup>3</sup>	Dow Method
Film Toughness			ASTM D882
MD	1000 ft·lb/in <sup>3</sup>	82.7 J/cm <sup>3</sup>	
TD	1000 ft·lb/in <sup>3</sup>	82.7 J/cm <sup>3</sup>	
Secant Modulus			ASTM D882
1% Secant, MD	38000 psi	262 MPa	
2% Secant, MD	31000 psi	214 MPa	
1% Secant, TD	37000 psi	255 MPa	
2% Secant, TD	31000 psi	214 MPa	
Tensile Strength			ASTM D882
MD : Yield	1750 psi	12.1 MPa	
TD : Yield	1700 psi	11.7 MPa	
MD : Break	5500 psi	37.9 MPa	
TD : Break	5500 psi	37.9 MPa	
Tensile Elongation			ASTM D882
MD : Break	500 %	500 %	
TD : Break	500 %	500 %	
Dart Drop Impact	200 g	200 g	ASTM D1709A
Elmendorf Tear Strength <sup>2</sup>			ASTM D1922
MD	380 g	380 g	
TD	600 g	600 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	228 °F	109 °C	ASTM D1525
Melting Temperature (DSC)	255 °F	124 °C	Dow Method
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	34	34	ASTM D2457

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Haze	18.0 %	18.0 %	ASTM D1003

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#### Extrusion Notes

Fabrication Conditions For Blown Film:

- Screw Size: 3.5 in.
- Screw Type: DSBII
- Die Gap: 70 mil (1.8 mm)
- Melt Temperature: 415 °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: 57 in.

#### Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

<sup>1</sup> 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/cm<sup>3</sup>. Base density is the estimated density of the polymer if it did not contain any antiblock.

<sup>2</sup> Method B

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<b>North America</b>		<b>Europe/Middle East</b>	+800-3694-6367
U.S. & Canada:	1-800-441-4369		+31-11567-2626
	1-989-832-1426	Italy:	+800-783-825
Mexico:	+1-800-441-4369		
<b>Latin America</b>		<b>South Africa</b>	+800-99-5078
Argentina:	+54-11-4319-0100		
Brazil:	+55-11-5188-9000		
Colombia:	+57-1-219-6000	<b>Asia Pacific</b>	+800-7776-7776
Mexico:	+52-55-5201-4700		+603-7965-5392

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