Technical Data Sheet

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

Description

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.

Main Characteristics

- 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)
- U.S. FDA FCN 1539 (with restrictions)
- EU, No 10/2011

Consult the regulations for complete details.

Additive

- Antiblock: No
- Processing aid: No
- Slip: No

Properties[1]

Physical	Nominal Value	Unit	Test Method[2]
Density	0.918	g/cm^3	ASTM D792
Base Density[3]	0.918	g/cm^3	Internal Method
Melt Index (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	25	µm	
Film Puncture Energy	4.52	J	Internal Method
Film Puncture Force	48.9	N	Internal Method
Film Puncture Resistance	24.8	J/cm^3	Internal Method

1. Typical properties: these are not to be construed as specifications. Users should confirm results by their own tests.
2. ASTM: American Society for Testing and Materials
3. 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^3. Base density is the estimated density of the polymer if it does not contain any antiblock.

Properties (Cont.)

Films	Nominal Value	Unit	Test Method
Film Toughness			ASTM D882
MD	82.7	J/cm^3	
TD	82.7	J/cm^3	
Secant Modulus			ASTM D882
1% Secant, MD	262	MPa	
1% Secant, TD	255	MPa	
2% Secant, MD	214	MPa	
2% Secant, TD	214	MPa	
Tensile Strength			ASTM D882
MD: Yield	12.1	MPa	
TD: Yield	11.7	MPa	
MD: Break	37.9	MPa	
TD: Break	37.9	MPa	
Tensile Elongation			ASTM D882
MD: Break	500	%	
TD: Break	500	%	
Dart Drop Impact	200	g	ASTM D1709A
Elmendorf Tear Strength[4]			ASTM D1922
MD	380	g	
TD	600	g	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	109	°C	ASTM D1525
Melting Temperature (DSC)	124	°C	Internal Method
Optical			
Gloss (45°)	34		ASTM D2457
Haze	18.0	%	ASTM D1003
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.

4. Method B.

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