TUFLIN™ HS-7028 NT 7

The Dow Chemical Company - Linear Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product 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

- 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.

General			
Material Status	• Commercial: Active		
Availability	• North America		
Additive	• Antiblock: No	• Processing Aid: No	• Slip: No
Agency Ratings	• EU 10/2011	• FDA 21 CFR 177.1520(c) 3.1a	
Forms	• Pellets		
Processing Method	• Blown Film		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.920		ASTM D792
Melt Mass-Flow Rate (190°C/2.16 kg)	1.0	g/10 min	ASTM D1238
Films	**Nominal Value**	**Unit**	**Test Method**
Film Thickness - Tested	1	mil	Internal Method
Film Puncture Energy	40.0	in·lb	Internal Method
Film Puncture Force	11.0	lbf	Internal Method
Film Puncture Resistance	300	ft·lb/in³	Internal Method
Film Toughness - MD	1000	ft·lb/in³	ASTM D882
Film Toughness - TD	1000	ft·lb/in³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	38000	psi	
2% Secant, MD	31000	psi	
Secant Modulus			ASTM D882
1% Secant, TD	37000	psi	
2% Secant, TD	31000	psi	
Tensile Strength - MD (Yield)	1750	psi	ASTM D882
Tensile Strength - TD (Yield)	1700	psi	ASTM D882
Tensile Strength - MD (Break)	5500	psi	ASTM D882
Tensile Strength - TD (Break)	5500	psi	ASTM D882
Tensile Elongation - MD (Break)	500	%	ASTM D882

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Films	Nominal Value	Unit	Test Method
Tensile Elongation - TD (Break)	500	%	ASTM D882
Dart Drop Impact	200	g	ASTM D1709A
Elmendorf Tear Strength - MD [2]	380	g	ASTM D1922
Elmendorf Tear Strength - TD [2]	600	g	ASTM D1922
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	228	°F	ASTM D1525
Melting Temperature (DSC)	255	°F	Internal Method
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (45°)	34		ASTM D2457
Haze	18.0	%	ASTM D1003

Processing Information

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

[1] Typical properties: these are not to be construed as specifications.

[2] Method B