



TUFLIN™ HS-7029 NT 7

Linear Low Density Polyethylene Resin

Overview TUFLIN™ HS-7029 NT 7 Linear Low Density Polyethylene Resin is an ethylene-hexene copolymer designed for cast and blown film applications such as trash bags, industrial can liners, heavy duty shipping sacks and retail bags. Films extruded with HS-7029 exhibit superb toughness, high tensile strength and elongation, excellent tear and puncture resistance, and are readily heat sealable.

Applications: Trash bags, industrial can liners, heavy duty shipping sacks and retail bags

Complies with:

- U.S. FDA 21 CFR 177.1520(c)3.1a (with Restrictions)
- Consult the regulations for complete details

Additive • Antiblock: No • Slip: No • Processing Aid: Yes

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	0.918 g/cm ³	0.918 g/cm ³	ASTM D792
Base Density ¹	0.918 g/cm ³	0.918 g/cm ³	Dow Method
Melt Index (190°C/2.16 kg)	1.3 g/10 min	1.3 g/10 min	ASTM D1238
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Film Thickness - Tested	1.0 mil	25 µm	Dow Method
Film Puncture Energy	30.0 in·lb	3.39 J	Dow Method
Film Puncture Force	10.0 lbf	44.5 N	Dow Method
Film Puncture Resistance	225 ft·lb/in ³	18.6 J/cm ³	Dow Method
Film Toughness			ASTM D882
MD	1000 ft·lb/in ³	82.7 J/cm ³	
TD	1100 ft·lb/in ³	91.0 J/cm ³	
Secant Modulus			ASTM D882
1% Secant, MD	32000 psi	221 MPa	
2% Secant, MD	29000 psi	200 MPa	
1% Secant, TD	44000 psi	303 MPa	
2% Secant, TD	37000 psi	255 MPa	
Tensile Strength			ASTM D882
MD : Yield	1500 psi	10.3 MPa	
TD : Yield	1700 psi	11.7 MPa	
MD : Break	4900 psi	33.8 MPa	
TD : Break	4300 psi	29.6 MPa	
Tensile Elongation			ASTM D882
MD : Break	500 %	500 %	
TD : Break	600 %	600 %	
Dart Drop Impact	160 g	160 g	ASTM D1709A
Elmendorf Tear Strength			ASTM D1922
MD	350 g	350 g	
TD	600 g	600 g	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	210 °F	99.0 °C	ASTM D1525
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Gloss (45°)	22	22	ASTM D2457
Haze	28 %	28 %	ASTM D1003



Extrusion Notes

Fabrication Conditions for 1 mil monolayer blown film at 100%

- Die Diameter: 8 in.
- Screw Type: DSB II
- Die Gap: 70 mil
- Melt Temperature: 405 °F
- Output: 12 lb/hr/in. of die circumference
- Screw Size: 3.5 in.
- Blow-Up Ratio: 2.5 to 1
- Screw Speed: 39 rpm
- Frost Line Height: 52 in.

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.

