



TUFLIN™ HS-7029 NT 7

The Dow Chemical Company - Linear Low Density Polyethylene Resin

Tuesday, November 5, 2019

General Information

Product Description

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

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Antiblock: No • Processing Aid: Yes • Slip: No
Agency Ratings	• FDA 21 CFR 177.1520(c) 3.1a
Forms	• Pellets

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)	1.3	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	1	mil	Internal Method
Film Puncture Energy	30.0	in-lb	Internal Method
Film Puncture Force	10.0	lbf	Internal Method
Film Puncture Resistance	225	ft-lb/in ³	Internal Method
Film Toughness - MD	1000	ft-lb/in ³	ASTM D882
Film Toughness - TD	1100	ft-lb/in ³	ASTM D882
Secant Modulus			ASTM D882
1% Secant, MD	32000	psi	
2% Secant, MD	29000	psi	
Secant Modulus			ASTM D882
1% Secant, TD	44000	psi	
2% Secant, TD	37000	psi	
Tensile Strength - MD (Yield)	1500	psi	ASTM D882
Tensile Strength - TD (Yield)	1700	psi	ASTM D882
Tensile Strength - MD (Break)	4900	psi	ASTM D882
Tensile Strength - TD (Break)	4300	psi	ASTM D882
Tensile Elongation - MD (Break)	500	%	ASTM D882
Tensile Elongation - TD (Break)	600	%	ASTM D882
Dart Drop Impact	160	g	ASTM D1709A
Elmendorf Tear Strength - MD	350	g	ASTM D1922
Elmendorf Tear Strength - TD	600	g	ASTM D1922

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Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	210	°F	ASTM D1525
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	22		ASTM D2457
Haze	28.0	%	ASTM D1003

Processing Information

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

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