

# TUFLIN™ HS-7029 NT 7

Linear Low Density Polyethylene Resin

The Dow Chemical Company

## Message:

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 Information			
Additive	Processing aid		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.1a		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.918	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.3	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	25	µm	Internal method
Film Puncture Energy	3.39	J	Internal method
Film Puncture Force	44.5	N	Internal method
Film Puncture Resistance	18.6	J/cm <sup>3</sup>	Internal method
Film strength			ASTM D882
MD	82.7	J/cm <sup>3</sup>	ASTM D882
TD	91.0	J/cm <sup>3</sup>	ASTM D882
secant modulus			ASTM D882
1% secant, MD	221	MPa	ASTM D882
2% secant, MD	200	MPa	ASTM D882
1% secant, TD	303	MPa	ASTM D882
2% secant, TD	255	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield	10.3	MPa	ASTM D882
TD: Yield	11.7	MPa	ASTM D882
MD: Fracture	33.8	MPa	ASTM D882
TD: Fracture	29.6	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Fracture	500	%	ASTM D882
TD: Fracture	600	%	ASTM D882
Dart Drop Impact	160	g	ASTM D1709A

Elmendorf Tear Strength <sup>1</sup>			ASTM D1922
MD	350	g	ASTM D1922
TD	600	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	99.0	°C	ASTM D1525
Optical	Nominal Value	Unit	Test Method
Gloss (45°)	22		ASTM D2457
Haze	28	%	ASTM D1003
Extrusion instructions			

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.

#### NOTE

1. Method B

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