

TUFLIN™ HS-7094 NT 7

Linear Low Density Polyethylene Resin

The Dow Chemical Company

Message:

TUFLIN™ HS-7094 NT 7 Linear Low Density Polyethylene Resin is a fractional melt, ethylene-hexene copolymer, linear low density (LLDPE) resin designed for good toughness and stiffness. This product is recommended for thin and thick gauge applications such as trash bags and heavy-duty shipping sacks that require strength and output.

Hexene Linear Low Density Resin

Good Strength and Stiffness

Good Processability at Narrow Die Gaps

Complies with U.S. FDA 21 CFR 177.1520 (c) 3.2a

Consult the regulations for complete details.

General Information			
Additive	Processing aid		
	Anti-caking agent (6000 ppm)		
Agency Ratings	FDA 21 CFR 177.1520(c) 3.2a		
Forms	Particle		
Processing Method	Blow film		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.930	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.80	g/10 min	ASTM D1238
Films	Nominal Value	Unit	Test Method
Film Puncture Energy			Internal method
20 µm	1.47	J	Internal method
51 µm	3.16	J	Internal method
Film Puncture Force			Internal method
20 µm	31.1	N	Internal method
51 µm	66.7	N	Internal method
Film Puncture Resistance			Internal method
20 µm	8.36	J/cm³	Internal method
51 µm	7.03	J/cm³	Internal method
Film strength			ASTM D882
MD : 20 µm	300	J/cm³	ASTM D882
MD : 51 µm	337	J/cm³	ASTM D882
TD : 20 µm	344	J/cm³	ASTM D882
TD : 51 µm	357	J/cm³	ASTM D882
secant modulus			ASTM D882
2% secant, MD: 20 µm	302	MPa	ASTM D882
2% secant, MD: 51 µm	290	MPa	ASTM D882
2% secant, TD: 20 µm	327	MPa	ASTM D882

2% secant, TD: 51 µm	322	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 20 µm	16.1	MPa	ASTM D882
MD: Yield, 51 µm	15.2	MPa	ASTM D882
TD: Yield, 20 µm	16.5	MPa	ASTM D882
TD: Yield, 51 µm	16.4	MPa	ASTM D882
MD: Break, 20 µm	59.7	MPa	ASTM D882
MD: Fracture, 51 µm	53.4	MPa	ASTM D882
TD: Break, 20 µm	44.6	MPa	ASTM D882
TD: Fracture, 51 µm	47.5	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Break, 20 µm	570	%	ASTM D882
MD: Fracture, 51 µm	740	%	ASTM D882
TD: Break, 20 µm	840	%	ASTM D882
TD: Fracture, 51 µm	850	%	ASTM D882
Dart Drop Impact			
20 µm	52	g	ASTM D1709A
20 µm	< 100	g	ASTM D1709B
51 µm	170	g	ASTM D1709A
51 µm	< 100	g	ASTM D1709B
Elmendorf Tear Strength ¹			ASTM D1922
MD : 20 µm	170	g	ASTM D1922
MD : 51 µm	590	g	ASTM D1922
TD : 20 µm	800	g	ASTM D1922
TD : 51 µm	1300	g	ASTM D1922
Seal Initiation Temperature ²			Internal method
20 µm	120	°C	Internal method
51 µm	130	°C	Internal method
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	114	°C	ASTM D1525
Melting Temperature (DSC)	126	°C	Internal method
Optical	Nominal Value	Unit	Test Method
Gloss			ASTM D2457
20°, 20.3 µm	23		ASTM D2457
20°, 50.8 µm	26		ASTM D2457
45°, 20.3 µm	43		ASTM D2457
45°, 50.8 µm	44		ASTM D2457
Haze			ASTM D1003
20.3 µm	18	%	ASTM D1003
50.8 µm	21	%	ASTM D1003
Additional Information	Nominal Value	Unit	Test Method
Seal Strength ³			Internal method

160°C, 20.3 μm	1500	g	Internal method
170°C, 50.8 μm	2600	g	Internal method
Extrusion	Nominal Value	Unit	
Melt Temperature	233	°C	
Extrusion instructions			

Fabrication Conditions For Blown Film:
Screw Size: 2.5 in. (63.5 mm) 30:1 L/D
Screw Type: DSBII
Die Gap: 70 mil (1.8 mm)
Melt Temperature: 451 °F (233 °C)
Output: 10 lb/hr/in. of die circumference
Die Diameter: 6 in.
Blow-Up Ratio: 2.5 to 1
Screw Speed: 78 rpm
Frost Line Height: 25 in. (635 mm)

NOTE

- | | |
|----|--|
| 1. | Method B |
| 2. | Temperature at which 1 lb/in. (4.4 N/25.4 mm) heat seal strength is achieved. Heat Seal Strengths, Topwave HT Tester 0.5 S dwell, 40 psi bar pressure, pull speed 10 (in./min.). |
| 3. | Heat Seal Strengths, Topwave HT Tester 0.5 S dwell, 40 psi bar pressure, pull speed 10 (in./min.). |

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

Susheng Import & Export Trading Co., Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



WECHAT