



Technical Data Sheet

DOWLEX™ 2687S Polyethylene Resin

Description

Next Generation DOWLEX™ 2687S Polyethylene Resin with extra stretch performance (ESP) is an ethylene-hexene-1 copolymer designated for cast stretch film applications, such as industrial pallet wrap. DOWLEX™ 2687S Polyethylene Resin provides stretch films with superior extensibility and increased resistance to failure around film flaws maintaining exceptional puncture resistance and load retention.

Main Characteristics

- Linear low density polyethylene
- For industrial pallet wrap stretch film applications

Complies with

- U.S. FDA FCN 1539

Consult the regulations for complete details.

Additive

- Antiblock: No
- Processing Aid: No
- Slip: No

Properties¹

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Density	0.917	g/cm ³	0.917	g/cm ³	ASTM D792
Melt Index (190°C/2.16 kg)	2.9	g/10 min	2.9	g/10 min	ASTM D1238
Films					
Film Thickness - Tested	1.0	mil	25	µm	
Film Puncture Resistance (1.0 mil (25 µm))	215	ft-lb/in ³	17.8	J/cm ³	Internal Method
Film Toughness					ASTM D882
MD: 1.0 mil (25 µm)	1040	ft-lb/in ³	85.9	J/cm ³	
TD: 1.0 mil (25 µm)	1060	ft-lb/in ³	88.0	J/cm ³	
Tensile Strength					ASTM D882
MD: Yield, 1.0 mil (25 µm)	1300	psi	8.99	MPa	
TD: Yield, 1.0 mil (25 µm)	1280	psi	8.84	MPa	
MD: Break, 1.0 mil (25 µm)	7270	psi	50.1	MPa	
TD: Break, 1.0 mil (25 µm)	5210	psi	35.9	MPa	
Tensile Elongation					ASTM D882
MD: Break, 1.0 mil (25 µm)	540	%	540	%	
TD: Break, 1.0 mil (25 µm)	630	%	630	%	

1. Typical properties: these are not to be construed as specifications. Users should confirm the results by their own tests.
2. ASTM: American Society for Testing and Materials



Properties (Cont.)

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Dart Drop Impact (1.0 mil (25 µm))	130	g	130	g	ASTM D1709A
Elmendorf Tear Strength					ASTM D1922
MD: 1.0 mil (25 µm)	330	g	330	g	
TD: 1.0 mil (25 µm)	440	g	440	g	
Thermal					
Vicat Softening Temperature	101	°F	38.3	°C	ASTM D1525
Melting Temperature (DSC)	253	°F	123	°C	Internal Method
Optical					
Gloss (45°, 1.00 mil (25.4 µm))	97		97		ASTM D2457
Haze (1.00 mil (25.4 µm))	0.780	%	0.780	%	ASTM D1003
Extrusion					
Melt Temperature	550	°F	288	°C	
Extrusion Notes					
Fabrication Conditions for Cast Film:					
Machine: Monolayer Cast Film Produced on 5 Layer Cast Line:					
<ul style="list-style-type: none">• Screw Size: 2 in. (51 mm) 30:1 L/D• Screw Size: 2.5 in. (63.5 mm) 30:1 L/D• Die Gap: 25 mil (0.6 mm)• Chill Roll Temperature: 70°F (21°C)• Melt Temperature: 550°F (275°C)• Output: 407 lb/hr• Line Speed: 600 fpm (183 m/min)					

