Technical Data Sheet

DOWLEX™ 2750ST Polyethylene Resin

Overview

DOWLEX™ 2750ST Polyethylene Resin is suitable for the production of high modulus blown and cast films. The resin offers an excellent balance of tensiles, tear and impact strength with good optics, and can be used to enable the reduction in gauge of various film structures.

Applications:

- Various industrial, consumer and specialty films.

Complies with:

- EU, No 10/2011

Consult the regulations for complete details.

Sustainability Attribute:

Resoursa™
Advancing resource efficiency with Dow

Additive

- Antiblock: No
- Slip: No
- Processing aid: No

Physical Properties

Physical	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Density[1]	0.950	g/cm³	0.950	g/cm³	ASTM[2] D792
Base Density[3]	0.950	g/cm³	0.950	g/cm³	Dow Method
Melt Index[2] (190°C/2.16 kg)	1.5	g/10 min	1.5	g/10 min	ASTM D1238
Films					
Film Thickness — Tested	2	mil	50	µm	
Film Puncture Energy[4] (2.0 mil (50 µm))	4.43	in·lb	0.500	J	ASTM D5748

1. Compression Molded
2. ASTM: American Society for Testing and Materials
3. 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.
4. Blown film extruded at 240°C, 50 microns, 2.0 BUR, 1.5 mm die gap.

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

Physical Properties (Cont.)

Films	Nominal Value	Unit (English)	Nominal Value	Unit (SI)	Test Method
Film Puncture Force[4] (2.0 mil (50 µm))	6.95	lbf	30.9	N	ASTM D5748
Film Puncture Resistance[4] (2.0 mil (50 µm))	13.3	ft·lb/in^3	1.10	J/cm^3	ASTM D5748
Tensile Modulus — 2% Secant, MD[4]					ISO[5] 527-3
2.0 mil (50 µm)	63800	psi	440	MPa	
Tensile Stress[4]					ISO 527-3
MD: Yield, 2.0 mil (50 µm)	3060	psi	21.1	MPa	
TD: Yield, 2.0 mil (50 µm)	3770	psi	26.0	MPa	
MD: Break. 2.0 mil (50 µm)	3340	psi	23.0	MPa	
TD: Break, 2.0 mil (50 µm)	3610	psi	24.9	MPa	
Tensile Elongation[4]					ISO 527-3
MD: Break. 2.0 mil (50 µm)	600	%	600	%	
TD: Break, 2.0 mil (50 µm)	720	%	720	%	
Dart Drop Impact[4] (2.0 mil (50 µm))	80	g	80	g	ISO 7765-1
Elmendorf Tear Strength[4]					ASTM D1922
MD: 2.0 mil (50 µm)	100	g	100	g	
TD: 2.0 mil (50 µm)	130	g	130	g	

Extrusion Notes

Typical Fabrication Conditions for Blown Film Resin:

- Die Gap: 1.2 to 2.5 mm
- Melt Temperature: 190 to 245°C
- Blow-Up Ratio: 1.5 to 3.5
- Recommended Gauge Range: 10 to 150 µm

5. ISO: International Standardization Organization

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