



## Technical Data Sheet

## Hand Stretch Film

### Description:

This stretch film designed based on Linear Low Density Polyethylene for manual wrapping applications, produced using the Cast or Blown extrusion technology depending on product specifications. It provides exceptional properties based on your needs and available in 1 to 3 layers with customized dimensions.

General Properties			Most Commonly Used Thicknesses (ISO 4593)				
PROPERTY	STANDARD	UNIT	12μm	15μm	17μm	20μm	23μm
Grammage	ISO 536	g/m <sup>2</sup>	11.04(±3%)	13.80(±3%)	15.64(±3%)	18.40(±3%)	21.16(±3%)
Yield	ISO1183-1/4593	m <sup>2</sup> /kg	90.5(±2%)	72.46(±2%)	63.89(±2%)	54.35(±2%)	47.28(±2%)
Film density	ISO 1183-1	g/cm <sup>3</sup>	0.92(±2%)	0.92(±2%)	0.92(±2%)	0.92(±2%)	0.92(±2%)
Mechanical Properties							
Tensile Strength MD	ISO 527-3	Mpa	20 – 22	22 – 25	23 – 26	25 – 28	27 – 30
Tensile Strength TD	ISO 527-3	Mpa	18 – 20	20 – 23	21 – 24	22 – 25	24 – 27
Elongation MD	ISO 527-3	%	500 – 600	550 – 650	550 – 650	500 – 600	450 – 550
Elongation TD	ISO 527-3	%	550 – 650	600 – 700	600 – 700	650 – 750	700 – 800
Pre-Stretch	In-house method	%	135 (±8%)	145 (±8%)	150 (±8%)	148 (±8%)	142 (±8%)
Puncture resistance	ISO 3036	N	3.5 – 4.2	4.5 – 5.5	5.8 – 7.0	7.5 – 9.0	9.5 – 11.5
Cling force	ISO 29865	g/cm <sup>2</sup>	120 – 150	150 – 180	180 – 220	200 – 250	220 – 280
Cling type	In-house method	side	Single	Single/dual	Single/dual	Dual	Dual
Optical Properties							
Haze	ISO 14782	%	4.5(±5%)	5.5(±5%)	6.5(±5%)	7.5(±5%)	8.5(±5%)
Gloss	ISO 2813	GU(60°)	65(±2GU)	60 (±2GU)	55 (±3GU)	50(±3GU)	45(±4GU)

- This is a basic TDS for common thicknesses and all the above specifications can be customized based on customer's needs.

### Applications:

Pallet wrapping. Space-saving in storage. Temporary packaging. Retail and store use...

### Storage:

Store in a clean, dry & ventilated environment and 15-25°C temp. keep away from heat sources. Do not store under pressure loads. Use within 12 months of production for best performance. Store vertically if possible.

### Handling:

Avoid sharp impacts. Use appropriate handling equipment like roll lifter.

### Packing:

Carton-packed. Carton-packed Palletized. Suitable for export and tailored to client needs.