

Technical data sheet

Product name: Terralene® LL 1101
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Version: 4.0

Designation of product, preparation and manufacturer

Trade name: Terralene® LL 1101
Use of product: Linear low density polyethylene, butene copolymer, blended with high-density polyethylene, contains processing additives. Suitable for blown film applications. The biobased carbon content (BCC) is 90 %.
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Mechanical properties

Modulus of elasticity	330	[MPa]	ISO 527
Tensile strength	11	[MPa]	ISO 527
Tensile strain at tensile strength	23	[%]	ISO 527
Tensile stress at break	---	[MPa]	ISO 527
Tensile strain at break	> 300	[%]	ISO 527
Flexural modulus	n/a	[MPa]	ISO 178
Flexural strain at break	n/a	[%]	ISO 178
Flexural stress at 3.5 % strain	n/a	[MPa]	ISO 178
Notched impact strength (Charpy), RT	n/a	[kJ/m ²]	ISO 179-1/1 eA
Impact Strength (Charpy), RT	n/a	[kJ/m ²]	ISO 179-1/1 eU
Shore D hardness	n/a	[-]	DIN 53505
Density	0.92	[g/cm ³]	ISO 1183
Bulk density	n/a	[kg/m ³]	ISO 60

The values listed have been established on standardized test specimens (DIN EN ISO 3167, type A) at standard temperature and humidity conditions.

Film properties (thickness 20 µm, BUR 2.4)

Tensile modulus MD/TD	290 / 310	[MPa]	ISO 527-5
Tensile strength (yield stress) MD/TD	37 / 32	[MPa]	ISO 527-5
Tensile strain at tensile strength MD/TD	675 / 685	[%]	ISO 527-5
Tensile stress at break MD/TD	36 / 31	[MPa]	ISO 527-5
Tensile strain at break MD/TD	675 / 685	[%]	ISO 527-5
Elmendorf tear resistance MD/TD	50 / 150	[N/mm]	ASTM D 1922
Impact strength (Spencer Impact Test)	130	[N/mm]	ASTM D 3420

MD= machine direction, TD = transverse direction

The values listed have been established on films at standard temperature and humidity conditions.

Thermal properties

Melting temperature	130 - 145	[°C]	ISO 3146-C
Vicat A softening temperature	107	[°C]	ISO 306
Heat distortion temperature HDT B	n/a	[°C]	ISO 75
Melt volume rate (190 °C/2.16 kg)	0.9 - 1.1	[cm ³ /10 min]	ISO 1133
Melt flow rate (190 °C/2.16 kg)	0.70 - 0.85	[g/10 min]	ISO 1133

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The figures should be regarded as guide values only. Under certain conditions the properties can be influenced to a significant extent by the processing conditions.

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