

Technical Data Sheet

LDPE L2102TX00

Low Density Polyethylene

Low-density polyethylene (LDPE) is a thermoplastic made from the monomer ethylene. It was the first grade of polyethylene. LDPE is defined by a density range of 0.917–0.930 g/cm³.

LDPE has more branching (on about 2% of the carbon atoms) than HDPE, so its intermolecular forces (instantaneous-dipole induced-dipole attraction) are weaker, its tensile strength is lower, and its resilience is higher. Also, because its molecules are less tightly packed and less crystalline due to the side branches, its density is lower. LDPE uses majorly revolve around manufacturing containers, dispensing bottles, wash bottles, tubing, plastic bags for computer components, and various molded laboratory equipments. LDPE has an excellent resistance to acids, bases and vegetable oils.

Applications:

For general purpose film without additives. used in a wide range of widths and thicknesses for pouches, bags, liners and lamination film.

Additives:

Anti oxidant

Properties	Value	Units	Test Method
Melt Flow Rate	1.9	dg/min	
Density	921	kg/m ³	
Clarity	29	MV	SABTEC method
Impact Strength	26	KJ/m	ASTM D 4272
Tear strength (TD)	25	KN/m	
Tear Strength (MD)	60	KN/m	
Yield stress (TD)	11	MPa	
Yield stress (MD)	13	MPa	
Tensile stress at break (TD)	20	MPa	
Strain at Break (TD)	>500	%	
Strain at Break (MD)	>150	%	
Modulus of Elasticity (TD)	200	MPa	
Modulus of Elasticity (MD)	190	MPa	
Coefficient of friction	>1	-	ASTM D 1894
Blocking	20	g	
Re-blocking	100	g	
Haze	11	%	ASTM D 1003A
Gloss (45 °)	50	%	ASTM D 2457

*Film properties have been measured at 25µm films.