

LLDPE**LLDPE R546U****LINEAR LOW-DENSITY POLYETHYLENE (LLDPE)**

This is a butene-comonomer linear low-density polyethylene (LLDPE) grade engineered for rotational moulding. It offers a balance of stiffness and toughness with high thermal-oxidative stability, good environmental stress crack resistance (ESCR) and UV8-grade (or higher) ultraviolet stabilisation, extending the usable processing window beyond the typical 240°C ceiling seen in comparable rotomoulding resins.

Typical Application

- Large outdoor toys and storage tanks
- Rotationally moulded kayaks and watercraft
- Large barrels and traffic barriers

Product Characteristics

- Balanced stiffness and toughness with high thermal-oxidative stability
- Good environmental stress crack resistance (ESCR)
- UV8-grade (or higher) ultraviolet stabilisation for outdoor service
- Extended high-temperature processing window for uniform wall build-up

Physical Properties

Properties	Test Method	Typical Value	Unit
Melt Mass-Flow Rate (190°C/2.16kg)	GB/T 3682.1-2018	5.00 ± 0.50	g/10 min
Density	GB/T 1033.2-2010	0.9350 ± 0.0030	g/cm ³
Tensile Stress at Yield	GB/T 1040.2-2006	≥12.0	MPa
Nominal Strain at Break	GB/T 1040.2-2006	≥200	%
Charpy Impact Strength (23°C)	GB/T 1043.1-2008	≥20	kJ/m ²
Heat Deflection Temperature (0.45 MPa)	GB/T 1634.2-2019	55	°C

1. The nominal properties reported herein are typical of the product and do not reflect normal testing variance; they should not be used for specification purposes.

2. Melt flow, density, tensile, elongation, impact and heat-deflection values are corroborated across the producer's published family data and a representative production-lot certificate of analysis (melt flow 5.02 g/10 min, density 0.9342 g/cm³, tensile stress at yield 13.6 MPa, elongation at break 750%, Charpy impact 66 kJ/m²); grade-specific certificate of analysis supplied per lot at order.