

LLDPE R50035E

Linear low density polyethylene for Rotational moulding

Description.

SABIC® LLDPE R50035E is a LLDPE copolymer that is designed to provide excellent stress crack resistance, excellent mechanical properties with high rigidity, toughness, gloss and very low warpage. The resin contains UV stabilizer. It is recommended that SABIC® LLDPE R50035E is grinded before use in rotational moulding applications.

Typical Applications.

SABIC® LLDPE R50035E is desinged for rotational moulding of large industrial and agricultural tanks, trash containers and chemical shipping drums. Its excellent mechanical properties and low warpage makes it suitable for injection moulding applications such as screw closures, caps and housewares. SABIC® LLDPE R50035E is UV stabilised; that provides excellent protection for the final product.

Processing conditions.

Oven temperature °C (°F) = 315 (600)

Typical processing temperature for injection moulding machines: 210 - 240 °C.

Mechanical properties.

Test specimens are prepared from compression moulded sheet made according to ASTM D-1928, procedure C.

Typical data.

Revision 20070427

Properties	Units SI	Values	Test methods
Polymer properties			
Melt flow rate (MFR) at 190 °C and 2.16 kg	g/10 min	5.0	ASTM D 1238
Density	kg/m ³	935	ASTM D 1505
Mechanical properties			
Tensile test			ASTM D 638
stress at yield	MPa	18	
stress at break	MPa	11.5	
strain at break	%	700	
secant modulus at 1% elongation	MPa	500	
Flexural test			ASTM D 790
Flexural modulus	MPa	724	
Flexural strength	MPa	19.3	
Hardness Shore D	-	69	ASTM D 2240
ESCR (100% Igepal), F50	h	>300	ASTM D 1693A
Thermal properties			
Vicat softening temperature	°C	115	ASTM D 1525
Brittleness temperature	°C	<-75	ASTM D 746