

SABIC® LLDPE R40039E

LINEAR LOW DENSITY POLYETHYLENE

DESCRIPTION

R40039E is a linear low density polyethylene grade with elevated density and higher viscosity designed to provide excellent mechanical properties with high rigidity, toughness, good impact strength, low warpage as well as excellent internal and external surface finish. It is in pelletized form, UV-stabilized and has good stress cracking resistance which can be suitable for outdoor applications.

TYPICAL APPLICATIONS

Rotational molding of large water tanks, large industrial and agricultural tanks and containers where good stiffness is required.

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES ⁽¹⁾			
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	3.5	g/10 min	ASTM D1238
Density	939	kg/m ³	ASTM D1505
MECHANICAL PROPERTIES ⁽²⁾			
Tensile Properties			
stress @ break	19	MPa	ASTM D638
strain @ break	580	%	ASTM D638
stress @ yield	18	MPa	ASTM D638
1% secant modulus	480	MPa	ASTM D638
Flexural Strength	15	MPa	ASTM D790
Hardness Shore D	69	-	ISO 868
ESCR (100% Igepal), F50	>150	Hrs	ASTM D1693B
THERMAL PROPERTIES			
Vicat Softening Temperature	119	°C	ASTM D1525
Brittleness Temperature	<-75	°C	ASTM D746

(1) Typical values; not to be construed as specification limits

(2) Based on injection molded specimens

PROCESSING CONDITIONS

Typical processing conditions for R40039E are:

- Oven temperature: 315°C
- Molding cycles vary with mold composition and its thickness, oven temperature and wall thickness of part being produced. Venting of the mold is recommended.