

# SABIC® LLDPE R40039EE

## LINEAR LOW DENSITY POLYETHYLENE

### DESCRIPTION

SABIC® LLDPE R40039EE is a medium density polyethylene (MDPE) copolymer. It is used for its good stress crack resistance, rigidity, gloss and low warpage. The resin contains UV-stabilizer. It is recommended that SABIC® LLDPE R40039E is grinded before use in rotational moulding applications.

#### Typical applications.

Because of the good processing performance and physical properties, SABIC® LLDPE R40039EE is used for the rotational moulding of large industrial and agricultural tanks, trash containers and chemical shipping drums. Due to the good mechanical properties and low warpage this product is typically used for injection moulding of screw closures, caps and housewares. The UV-stabilization provides good protection for the final product.

#### Processing conditions.

Moulding cycles vary with mould composition and mould wall thickness, oven temperature and wall thickness of the part being produced. Venting of the mould is recommended. Normal cooling is satisfactory for SABIC® LLDPE R40039EE. Oven temperature °F (°C) = 600 (315). 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.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

### TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate</b>			
at 190 °C and 2.16 kg	3.5	dg/min	ASTM D1238
<b>Density</b>	937	kg/m <sup>3</sup>	ASTM D1505
<b>MECHANICAL PROPERTIES</b>			
<b>Tensile test</b>			
stress at break	19	MPa	ASTM D638
stress at yield	18	MPa	ASTM D638
secant modulus at 1% elongation	600	MPa	ASTM D638
strain at break	500	%	ASTM D638
<b>Flexural test</b>			
Secant modulus at 1% elongation	710	MPa	ASTM D790
<b>Hardness Shore D</b>	69	-	ISO 868
<b>ESCR (100% Igepal CO-630), F50</b>	>150	h	ASTM D1693A
<b>THERMAL PROPERTIES</b>			
<b>Vicat Softening Temperature</b>	117	°C	ASTM D1525
<b>Brittleness Temperature</b>	<-75	°C	ASTM D746

### QUALITY

SABIC is fully certified in accordance with the internationally accepted quality standard ISO 9001.