

# SABIC® LLDPE R50035EE

LINEAR LOW DENSITY POLYETHYLENE

## DESCRIPTION

SABIC® LLDPE R50035EE is a LLDPE copolymer that provides good stress crack resistance, rigidity, toughness, gloss and very low warpage. The resin contains UV stabilizer. It is recommended that SABIC® LLDPE R50035EE is grinded before use in rotational moulding applications.

Typical Applications.

SABIC® LLDPE R50035EE is used for rotational moulding of large industrial and agricultural tanks, trash containers and chemical shipping drums. Because of its good mechanical properties and low warpage, it is used for injection moulding of screw closures, caps and housewares. SABIC® LLDPE R50035EE is UV stabilised; which provides good 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.

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

## TYPICAL PROPERTY VALUES

Revision 20240126

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate (MFR)</b>			
at 190 °C and 2.16 kg	5.0	dg/min	ASTM D1238
<b>Density</b>	933	kg/m <sup>3</sup>	ASTM D1505
<b>MECHANICAL PROPERTIES</b>			
<b>Tensile test</b>			
stress at break	17	MPa	ASTM D638
stress at yield	16	MPa	ASTM D638
strain at break	590	%	ASTM D638
<b>Flexural test</b>			
Flexural strength	13	MPa	ASTM D790
Secant modulus at 1% elongation	420	MPa	ASTM D790
<b>Hardness Shore D</b>			
	66	-	ISO 868
<b>ESCR (100% Igepal CO-630), F50</b>	>150	h	ASTM D1693A
<b>THERMAL PROPERTIES</b>			
<b>Vicat Softening Temperature</b>			
	114	°C	ASTM D1525
<b>Brittleness Temperature</b>	<-75	°C	ASTM D746

## ENVIRONMENT AND RECYCLING

The environmental aspects of any packaging material do not only imply waste issues but have to be considered in relation with the use of natural resources, the preservations of foodstuffs, etc. SABIC considers polyethylene to be an environmentally efficient packaging material. Its low specific energy consumption and insignificant emissions to air and water designate polyethylene as the ecological alternative in comparison with the traditional packaging materials. Recycling of packaging materials is supported by SABIC whenever ecological and social benefits are achieved and where a social infrastructure for selective collecting and sorting of packaging is fostered. Whenever 'thermal' recycling of packaging (i.e. incineration with energy recovery) is carried out, polyethylene -with its fairly simple molecular structure and low amount of additives- is considered to be a trouble-free fuel.

## STORAGE AND HANDLING

Polyethylenes resins (in pelletised or powder form) should be stored in such a way that it prevents exposure to direct sunlight and/or heat, as this may lead to quality deterioration. The storage location should also be dry, dust free and the ambient temperature should not exceed 50 °C. Not complying with these precautionary measures can lead to a degradation of the product which can result in colour changes, bad smell and inadequate product performance. It is also advisable to process polyethylene resins (in pelletised or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality.

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