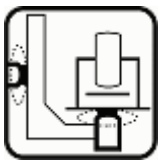

SABIC® LLDPE R40039EE

Linear low density polyethylene for Rotational moulding

Description.
SABIC® LLDPE R40039EE is a medium density polyethylene (MDPE) copolymer. It is designed to provide excellent stress crack resistance, excellent mechanical properties with high rigidity, toughness, gloss and very low warpage. The resin contains UV-stbilizer.
It is recommended that SABIC® LLDPE R40039E is grinded before use in rotational moulding applications.

Typical applications.
SABIC® LLDPE R40039EE is a grade whose good processing performance and physical properties make it suitable for the 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. The UV-stabilization provides excellent 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.

The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/ medical applications.

Typical data. Revision 20131028

Properties	Units SI	Values	Test methods
Polymer properties			
Melt flow rate (MFR)			ASTM D 1238
at 190 °C and 2.16 kg	dg/min	**3.5**	
Density	kg/m³	**939**	ASTM D 1505
Mechanical properties			
Tensile test			ASTM D 638
stress at yield	MPa	**18**	
stress at break	MPa	**19**	
strain at break	%	**500**	
secant modulus at 1% elongation	MPa	**600**	
Flexural test			ASTM D 790
Secant modulus at 1% elongation	MPa	**710**	
Hardness Shore D	-	**69**	ASTM D 2240
ESCR (100% Igepal), F50	h	**>150**	ASTM D 1693B
Thermal properties			
Vicat softening temperature	°C	**117**	ASTM D 1525
Brittleness temperature	°C	**<-75**	ASTM D 746

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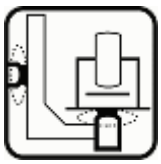

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General information. SABIC Europe's assortment contains both butene and hexene grades. SABIC® LLDPE, produced by gasphase technology, is characterized by a high purity, an excellent extrusion performance and draw down capability due to its low gel content. SABIC® LLDPE is stabilized with an antioxidant package suitable for film purposes.

Health, Safety and Food Contact regulations. Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, available on the Internet (www.SABIC-europe.com). Additional specific information can be requested via your local Sales Office.

Quality. SABIC Europe is fully certified in accordance with the internationally accepted quality standard ISO 9001. It is SABIC Europe's policy to supply materials that meet customers specifications and needs and to keep up its reputation as a pre-eminent, reliable supplier of e.g. polyethylenes.

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.

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 Europe 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 Europe 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.

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