

SABIC® LLDPE R6438E2

LINEAR LOW DENSITY POLYETHYLENE

DESCRIPTION

SABIC® LLDPE R6438E2 is a hexene linear low density polyethylene that provides good stress crack resistance, rigidity, toughness and easy procesability. This resin is typically used for rotational molding of large industrial and agricultural tanks, trash containers and chemical storage containers.

SABIC® LLDPE R6438E2 is formulated with an UV-stabilization package, which can be suitable for outdoor applications and is supplied in pelletized form. It is recommended that SABIC® LLDPE R6438E2 is grinded before use in rotational molding applications.

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

TYPICAL PROPERTY VALUES

Revision 20260722

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	4.5	dg/min	ISO 1133
Density	938	kg/m ³	ISO 1183
MECHANICAL PROPERTIES			
Tensile test ⁽¹⁾ ⁽²⁾			
Stress at yield	19	MPa	ISO 527-2
Strain at break	>800	%	ISO 527-2
Tensile modulus	670	MPa	ISO 527-2
Flexural test			
Flexural modulus	820	MPa	ISO 178
Flexural strength	20	MPa	ISO 178
Charpy Impact Strength Notched			
at 23 °C	10	kJ/m ²	ISO 179/1eA
Hardness Shore D	57	-	ISO 868
ESCR (100% Igepal CO-630), F50	>1000	h	ASTM D1693B
THERMAL PROPERTIES			
Heat deflection temperature			
at 0.45 MPa (HDT/B)	58	°C	ISO 75-2
at 1.80 MPa (HDT/A)	39	°C	ISO 75-2
Vicat Softening Temperature ⁽³⁾ ⁽⁴⁾			
at 10 N (VST/A)	117	°C	ISO 306
DSC test			
melting point	126	°C	ISO 11357-3

(1) Test specimen according to ISO 527-2 type 1BA, thickness 3 mm

(2) Speed of testing: 50 mm/min

(3) Compression moulding of test specimen at 180°C according to ISO 17855-2

(4) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours

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 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.

DISCLAIMER

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