

SABIC® LLDPE M500026

Linear low density polyethylene for Injection moulding

Description.

SABIC® LLDPE M500026 is a high flow, linear low density polyethylene copolymer injection moulding grade with a narrow molecular weight distribution. It has been designed to have excellent low temperature toughness, stress crack resistance (ESCR), mouldability and gloss.

Typical applications.

SABIC® LLDPE M500026 is recommended for injection moulding of containers and reclosure lids. It is well suited for fast cycle, deep draw injection moulding applications, which takes advantage of its high flow properties. Also, the higher melting point of the material allows for high end-use temperature when compared with conventional polyethylenes of equal density.

Processing conditions.

Typical moulding conditions for SABIC® LLDPE M500026 are:

Material temperature: 180 - 230 °C (355 - 446 °F)

Mould temperature: 5 - 30 °C (40 - 85 °F)

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

Typical data.

Revision 20100303

Properties	Units SI	Values	Test methods
Polymer properties			
Melt flow rate (MFR) at 190 °C and 2.16 kg	g/10 min	50	ASTM D 1238
Density ¹⁾	kg/m ³	926	ASTM D 1505
Mechanical properties ¹⁾			
Tensile test			ASTM D 638
stress at yield	MPa	13	
stress at break	MPa	12.4	
strain at break	%	120	
secant modulus at 1% elongation	MPa	354	
Izod impact notched at 23 °C	J/m	450	ASTM D 256
Hardness Shore D	-	55	ASTM D 2240
ESCR (100% Igepal), F50	h	2	ASTM D 1693A
Thermal properties ¹⁾			
Vicat softening temperature at 10 N (VST/A)	°C	88	ASTM D 1525
Brittleness temperature	°C	< -75	ASTM D 746

1) Test specimens are prepared from compression moulded sheet made according to ASTM D 1928 Procedure C.



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General information. The SABIC® LLDPE product range for injection moulding is produced in a gasphase process using a Ziegler/Natta catalyst. As a result, the primary characteristic of the SABIC® LLDPE grades is a narrow molecular weight distribution enabling the production of articles with high flow-path to wall-thickness ratios without the risk of warpage. Additional characteristics are a high purity of the polymer, high stability during processing and a good natural colour. These properties are directly linked with the unique production process of these materials.

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 9001-2000. 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.

Disclaimer. The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties.

It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us.

Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

SABIC Europe as referred to herein means any legal entity belonging to the SABIC Europe group of companies.