SABIC® LLDPE M200024

Linear low density polyethylene for Injection moulding

Description.

SABIC® LLDPE M200024 is a 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) and gloss.

Typical applications.

SABIC® LLDPE M200024 is well suited for injection moulding of large items where high flow and fast cycles are required. It is recommended for housewares, trash cans, automotive parts, lids and large industrial containers.

Processing conditions.

Typical moulding conditions for SABIC® LLDPE M200024 are:
Material temperature: 193 - 232 °C (380 - 450 °F)
Mould temperature: 5 - 30 °C (40 - 85 °F)

Typical data.

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Properties	Units SI	Values	Test methods
Polymer properties			
Melt flow rate (MFR)			ASTM D 1238
at 190 °C and 2.16 kg	g/10 min	**20**	
Density [1)]	kg/m³	**924**	ASTM D 1505
Mechanical properties [1)]			
Tensile test			ASTM D 638
stress at yield	MPa	**12**	
stress at break	MPa	**8.5**	
strain at break	%	**450**	
secant modulus at 1% elongation	MPa	**315**	
Izod impact notched at 23 °C	J/m	**540**	ASTM D 256
Hardness Shore D	-	**55**	ASTM D 2240
ESCR (100% Igepal), F50	h	**24**	ASTM D 1693A
Thermal properties [1)]			
Vicat softening temperature			ASTM D 1525
at 10 N (VST/A)	°C	**94**	
Brittleness temperature	°C	**< -75**	ASTM D 746

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

internet www.SABIC-europe.com
email TCC.TM-PE@SABIC-europe.com

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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.

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