



SABIC® LDPE 2022TN00

Low density polyethylene for Injection moulding

Description.

SABIC® LDPE 2022TN00 is specially developed for applications that require a good balance between flow properties and mechanical properties, e.g. toys, household articles, clamping lids.

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

Typical data.

Revision 20101105

Properties	Units SI	Values	Test methods
Polymer properties			
Melt flow rate (MFR) at 190 °C and 2.16 kg	g/10 min	22	ISO 1133
at 190 °C and 5 kg	g/10 min	75	
Melt volume rate (MVR) at 190 °C and 2.16 kg	ml/10 min	29	ISO 1133
at 190 °C and 5 kg	ml/10 min	98	
Density ¹⁾	kg/m ³	919	ISO 1183
Mechanical properties ^{1) 2)}			
Tensile test ^{3) 4)}			ISO 527-2
stress at yield	MPa	8	
stress at break	MPa	7	
strain at break	%	400	
tensile modulus	MPa	175	
Creep modulus ^{5) 6)}			ISO 899
after 1 hour	MPa	80	
after 1000 hours	MPa	45	
Izod impact notched			ISO 180/A
at 23 °C	kJ/m ²	42	
at -30 °C	kJ/m ²	5.0	
Hardness Shore D	-	40	ISO 868
ESCR ⁷⁾	h	3	SABIC method
Thermal properties			
Heat deflection temperature ^{1) 2)}			ISO 75-2
at 0.45 MPa (HDT/B)	°C	39	
Vicat softening temperature ^{1) 2)}			ISO 306
at 10 N (VST/A)	°C	82	
DSC test			DIN 53765
melting point	°C	105	
enthalpy change	J/g	104	

- 1) Compression moulding conditions of test specimen (according to ISO 293) :
moulding temp: 160 °C, cooling rate: 40 °C/min
- 2) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours
- 3) Speed of testing: 50 mm/min
- 4) Test specimen according to ISO 527-2 type 1BA, thickness 2 mm
- 5) Test specimen according to ISO 3167, thickness 4 mm
- 6) Determined at 23 °C, 3 MPa
- 7) Determined in Rhodacal-DS10 at 60 °C, 2 MPa, thickness 3 mm



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General information. The SABIC® LDPE (low density polyethylene) assortment for injection moulding is primarily characterized by the wide range of properties it can offer.

The LDPE assortment comprises specific grades suited for all types of machinery and every possible application including materials with very high melt flow indices- and therefore excellent flow properties- suitable for the most complex injection moulding applications.

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.