

SABIC® LDPE 1922N0

LOW DENSITY POLYETHYLENE

DESCRIPTION

SABIC® LDPE 1922N0 is an additive free LDPE grade produced by SABICs CTR® tubular technology. This grade is typically used for food contact applications that require high product quality, consistency and high level of purity. SABIC will offer for SABIC® LDPE 1922N0 the full food compliance service package.

Application

SABIC® LDPE 1922N0 is typically used for applications that require a good balance between flow properties and mechanical properties.

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

TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
POLYMER PROPERTIES			
Melt Flow Rate (MFR)			
at 190 °C and 5 kg	75	dg/min	ISO 1133
at 190 °C and 2.16 kg	22	dg/min	ISO 1133
Melt volume rate (MVR)			
at 190 °C and 5 kg	98	ml/10 min	ISO 1133
at 190 °C and 2.16 kg	29	ml/10 min	ISO 1133
Density	919	kg/m ³	ASTM D1505
MECHANICAL PROPERTIES			
Tensile test ^{(1) (2)}			
tensile modulus	175	MPa	ISO 527-2
strain at break	400	%	ISO 527-2
stress at yield	8	MPa	ISO 527-2
stress at break	7	MPa	ISO 527-2
Creep modulus ^{(3) (4)}			
after 1000 hours	45	MPa	ISO 899
after 1 hour	80	MPa	ISO 899
Izod impact notched			
at -30 °C	5.0	kJ/m ²	ISO 180/A
at 23 °C	42	kJ/m ²	ISO 180/A
Hardness Shore D	40	-	ISO 868
THERMAL PROPERTIES			
Heat deflection temperature ⁽⁵⁾			
at 1.80 MPa (HDT/A)	39	°C	ISO 75-2
Vicat Softening Temperature			
at 10 N (VST/A)	83	°C	ISO 306
DSC test			
melting point	107	°C	DIN 53765
enthalpy change	104	J/g	DIN 53765

- (1) Test specimen according to ISO 527-2 type 1BA, thickness 2 mm
- (2) Speed of testing: 50 mm/min
- (3) Test specimen according to ISO 3167, thickness 4 mm
- (4) Determined at 23 °C, 3 MPa
- (5) 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.