

LDPE L1922T

Low Density Polyethylene for Injection Moulding

Application

The grade especially developed for applications requiring a good balance between flow properties and mechanical properties, e.g. toys, houseware, snap-on lids.

Typical Data

Properties	Value	Unit	Test Method
Polymer Properties			
Density ¹⁾²⁾	919	kg/m ³	
Melt Flow Rate (MFR)			
at 190 °C and 2.16 kg	22	dg/min	
at 190 °C and 5 kg	75	dg/min	
Melt Volume Rate (MVR)			
at 190 °C and 2.16 kg	29	dg/10 min	
at 190 °C and 2.16 kg	98	dg/10 min	
Mechanical Properties ²⁾			
Tensile test ³⁾⁴⁾			
Stress at yield ⁶⁾	8	MPa	
Stress at break ⁶⁾	7	MPa	
Strain at break ⁶⁾	400	%	
Tensile modulus ⁵⁾	175	MPa	
Creep modulus ⁷⁾			
after 1 hour	80	MPa	
after 1000 hour	45	MPa	
Notched Izod ³⁾⁸⁾			
at + 23 °C	42	KJ/m ²	
at - 30 °C	5	KJ/m ²	
Tensile impact test ³⁾⁹⁾			
Notched tensile impact strength	86	KJ/m ²	
Elongation at break	8.4	%	
Maximum tension	16	MPa	
Hardness Shore D ³⁾¹⁰⁾			
	45	-	
Ball indentation test ³⁾			
Applied load	49	N	
Ball indentation hardness	16	MPa	
ESCR ³⁾¹¹⁾			
	3	h	
Thermal properties			
Heat deflection temperature			
at 0.45 MPa (HDT/B)	39	°C	
Vicat softening temperature			
at 10 n (VST/A)	82	°C	
DSC test			
Melting point ¹²⁾	105	°C	
Enthalpy change	104	J/g	

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General information

LPC produces low density polyethylene by the tubular reactor process. As a result the product range covers a wide variety of densities and melt flow rates. The LDPE grade slate has a wide variety of slip and anti block additives levels and includes a large numbers of grades with excellent optical properties.

LPC tubular production technology guarantees a very low gel level and outstanding draw down ability, low odour and taste levels, which is of advantage for thin film processing and e.g. food packaging.

Quality

LPC is fully certified in accordance with the internationally accepted quality standard ISO 9001-2000. It is LPC 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.

Environment

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. LPC 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

Recycling of packaging materials is supported by LPC 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 packagings (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.

Food approvals

The converter/food packager is responsible for compliance of the performance of the final article under foreseeable conditions of use. More specific information on the regulatory aspects of the LPC polyethylene is available in the relevant Food Approval Declarations which can be obtained from LPC Sales Office.

Safety

Under normal conditions polyethylenes do not present a toxic hazard through skin contact or inhalation. During processing contact with molten polymer and inhalation of volatilized fumes should be avoided. It is recommended to install exhaust hoods over processing machines and to keep working area well ventilated. More specific information on the safety aspects of the LPC polyethylenes is provided in the relevant Material Safety Data Sheets, available from LPC Sales Office.

Storage

As polyethylenes, like most polymers, are combustible, the usual precautions concerning ignition sources should be taken in warehouses and storage rooms. Where large quantities are kept in store, it is necessary to observe the normal rules for orderly stock control and to keep out dust and moisture. Polyethylenes should be stored in such a way as to prevent exposure to direct sunlight, as this may lead to quality deterioration.

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 customer's 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.