

Process Optimization



ASPC

Doc Name:

Product Data sheet - LDPE- Low Density Polyethylene
LTH 1922

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Doc No.

TEC-PRO-PDS-007

Rev: 4

Typical Data

Properties	Value	unit	Test method
Polymer Properties			
MFI (190 °C /2 .16 Kg)	22	dg/min	ISO 1133
MFI (190 °C /5 Kg)	75	dg/min	ISO 1133
MVR (190 °C /2 .16 Kg)	29	ml/10min	ISO 1133
MVR (190 °C /5 Kg)	98	ml/10min	ISO 1133
Density	919	Kg/m3	ISO 1183 (A)
Thermal Properties			
Heat deflection temperature at 0.45MPa (HDT/B)	39	°C	ISO 75
Vicat softening temperature at 10N (VST/A)	82	°C	ISO 306
Melting Point	105	°C	DIN 53765
Enthalpy change	104	J/g	DIN 53765
Mechanical properties			
Stress at yield	8	MPa	ISO 527/2
Stress at break	7	MPa	ISO 527/2
Strain at break	400	%	ISO 527/2
Tensile modulus	175	MPa	ISO 527/2
Creep modulus (After 1 hour)	80	MPa	ISO 899
Creep modulus (After 1000 hour)	45	MPa	ISO 899
Notched Izod at +23 °C	42	KJ/m ²	ISO 180 A
Notched Izod at -30 °C	5	KJ/m ²	ISO 180 A
Notched Tensile impact strength	86	KJ/m ²	ISO 8256/1B
Elongation at break	8.4	%	ISO 8256/1B
Maximum Tension	16	MPa	ISO 8256/1B
Hardness Shore D	45	-	ISO 868
Ball indentation test			
Applied load	49	N	ISO 2039-1
Ball indentation hardness	16	MPa	ISO 2039-1
ESCR	3	h	SABTEC Method
Additive			
Antioxidant			

Application

LTH 1922 is specially developed for applications that require a good balance between flow properties and mechanical properties, e.g. toys, household articles, clamping lids.

General information

LTH 1922 has been manufactured using SABTEC licensed technology.

Note: this information is based on our current knowledge and experience .in view of many factors that may affect processing and application, this data does not relive processors from the responsibility of carrying out their own tests and experiments, neither does it imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed.

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Packaging

Supplied in pellet form and can be packaged in 25kg bags, 1 ton semi bulk or 17 ton bulk.

Food packaging

The above mentioned grade meets the relevant requirements of plastics directive 2002/72/EC (06-08-2002) and its amendments till directive 2008/39EC relating to plastic materials and articles intended to come into contact with foodstuffs.

Pharmaceutical Application

The above mentioned grade meets the requirements of the European pharmacopeia version 6 section 3.1.5 for pharmaceutical application..

Conveying

Conveying equipment should be designed prevent accumulation of fines and dust particles can, under certain conditions, pose an explosion hazard. We recommend that the conveying system used:

1. be equipped with adequate filters
2. is operated and maintained in such a manner to ensure no leaks develop
3. that adequate grounding exists at all times

We further recommended that good housekeeping will practiced throughout the facility

Storage

As ultraviolet light may cause a change in the material, all resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust Free and the ambient temperature should not exceed 50 0C. It is also advisable to process polyethylene resins (in pelletized or powder form) within 6 months after delivery, this because also excessive aging of polyethylene can lead to a deterioration in quality

Handling

Minimal protection to prevent possible mechanical or thermal injury to the eyes. Fabrication areas should be ventilated to carry away fumes or vapors.

Combustibility

Polyethylene resins will burn when supplied adequate heat and oxygen. They should be handled and stored away from contact with direct flames and/or other ignition sources .in burning; polyethylene resins contribute high heat and may generate a dense black smoke. Fires can be extinguished by conventional means with water and mist preferred. In enclosed areas, fire fighters should be provided with self contained breathing apparatus.

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