



LALEH Petrochemical Co.

LDPE 2004TX00

Low Density Poly Ethylene for Blown Film

Application

The material is intended for very thin film requiring very good optical properties and is thus mainly applied in general packaging film such as textile packaging.

Additives

Anti oxidant

Typical Data

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	4.7	dg/min	
Density	921	kg/m ³	
Optical Properties			
Gloss (45°)	53	%	ASTM D 2457
Haze	9.5	%	ASTM D 1003A
Clarity	23	mV	SABTEC method
Mechanical Properties			
Impact strength	15	kJ/m	ASTM D 4272
Tear strength TD	30	kN/m	
Tear strength MD	80	kN/m	
Tensile test			
Yield stress TD	11	MPa	
Yield Stress MD	12	MPa	
Tensile Stress at break TD	15	MPa	
Tensile Stress at break MD	27	MPa	
Strain at break TD	>450	%	
Strain at break MD	100	%	
Modulus of elasticity TD	190	MPa	
Modulus of elasticity MD	190	MPa	
Coefficient of friction	0.2		ASTM D 1894
Blocking	< 5	g	
Re-Blocking	100	g	

O = oleamide , E = erucamide

LDPE 2004TX00

Low Density Poly Ethylene for Blown Film

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 odor 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. polyethylene.

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 are 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.

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LALEH Petrochemical Co.

LDPE 2101TN47

Low Density Poly Ethylene for Blown Film

Application

Due to its good processability. The grade has a low energy consumption during processing and has a good draw down ability. This grade enables high speed production of film without blocking. The material is very suitable for thin industrial film, thin packaging film and carrier bags which require high toughness in combination with high resistance to tearing, good optical properties and excellent converting properties.

Additives

Anti oxidant – Anti block – Slip agent

Typical Data

2101TN47 is a grade produced by the tubular process contains high anti block level and medium level of slip agent .

The LPC Polyethylene are supplied in the form of pellets, in bulk or in 25 kg bags. The bags are delivered on shrink-wrapped pallets, with a total weight of 1375 kg per pallet.

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	0.85	dg/min	
Density	921	kg/m ³	
Formulation			
Slip	700 O	ppm	
Anti block	1100	ppm	
Optical Properties			
Gloss (45°)	49	%	ASTM D 2457
Haze	11	%	ASTM D 1003A
Clarity	37	mV	SABTEC method
Mechanical Properties			
Impact strength	30	kJ/m	ASTM D 4272
Tear strength TD	30	kN/m	
Tear strength MD	40	kN/m	
Tensile test			
Yield stress TD	11	MPa	
Yield Stress MD	12	MPa	
Tensile Stress at break TD	21	MPa	
Tensile Stress at break MD	24	MPa	
Strain at break TD	>500	%	
Strain at break MD	>200	%	
Modulus of elasticity TD	170	MPa	
Modulus of elasticity MD	160	MPa	
Coefficient of friction	0.1		ASTM D 1894
Blocking	10	g	
Re-Blocking	30	g	

* Film properties have been measured at 45µm films .

O = oleamide , E = erucamide

LDPE 2101TN47

Low Density Poly Ethylene for Blown Film

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 number 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.

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LALEH Petrochemical Co.

LDPE 2404TC47

Low Density Poly Ethylene for Blown Film

Application

The grade has an excellent draw down ability. The material offers very good optical properties. It is therefore used in very thin films requiring good optical properties for general packaging applications, e.g. covering film with a very low blocking tendency.

Additives

Anti oxidant – Anti block – Slip agent

Typical Data

2404TC47 is a grade with an increased density and a very high amount of anti blocking and high amount of slip agent that produced by the tubular process

The LPC Polyethylene are supplied in the form of pellets, in bulk or in 25 kg bags. The bags are delivered on shrink-wrapped pallets, with a total weight of 1375 kg per pallet.

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	4.7	dg/min	
Density	924	kg/m ³	
Formulation			
Slip	1000 O	ppm	
Anti block	2000	ppm	
Optical Properties			
Gloss (45°)	50	%	ASTM D 2457
Haze	12	%	ASTM D 1003A
Clarity	28	mV	SABTEC method
Mechanical Properties			
Impact strength	13	kJ/m	ASTM D 4272
Tear strength TD	30	kN/m	
Tear strength MD	90	kN/m	
Tensile test			
Yield stress TD	13	MPa	
Yield Stress MD	13	MPa	
Tensile Stress at break TD	16	MPa	
Tensile Stress at break MD	27	MPa	
Strain at break TD	>450	%	
Strain at break MD	100	%	
Modulus of elasticity TD	250	MPa	
Modulus of elasticity MD	230	MPa	
Coefficient of friction	0.2		ASTM D 1894
Blocking	< 5	g	
Re-Blocking	20	g	

* Film properties have been measured at 25µm films .

O = oleamide , E = erucamide

LDPE 2404TC47

Low Density Poly Ethylene for Blown Film

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 number 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 customer specifications and needs and to keep up its reputation as a pre-eminent, reliable supplier of e.g. polyethylenes.

Environment

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Recycling

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Food approvals

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Safety

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Storage

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LALEH Petrochemical Co.

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.

L1922T is a special grade produced by the tubular process.

The LPC Polyethylene are supplied in the form of pellets, in bulk or in 25 kg bags. The bags are delivered on shrink-wrapped pallets, with a total weight of 1375 kg per pallet.

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	

LDPE L1922T

Low Density Poly Ethylene for Injection Moulding

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 number 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 customer 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 preservation 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 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.

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.

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LALEH Petrochemical Co.

LDPE L2100TN00

Low Density Poly Ethylene for Blown Film

Application

Grade with excellent toughness and tear strength and outstanding shrink properties.very low energy consumption during processing and has excellent draw down ability.The material contains no additives and is suitable for application in shrinkhoods,industrial sacks,heavy duty carrier bags and liners.

Additives

Anti oxidant

Typical Data

L2100TN00 is a heavy duty film grade produced by the tubular process without additives.

The LPC Polyethylene are supplied in the form of pellets,in bulk or in 25 kg bags.The bags are delivered on shrink-wrapped pallets,with a total weight of 1375 kg per pallet.

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	0.3	dg/min	
Density	921	kg/m ³	
Optical Properties			
Gloss (45°)	46	%	ASTM D 2457
Haze	12	%	ASTM D 1003A
Clarity	65	mV	SABTEC method
Mechanical Properties			
Impact strength	35	kJ/m	ASTM D 4272
Tear strength TD	25	kN/m	
Tear strength MD	20	kN/m	
Tensile test			
Yield stress TD	11	MPa	
Yield Stress MD	12	MPa	
Tensile Stress at break TD	26	MPa	
Tensile Stress at break MD	29	MPa	
Strain at break TD	> 500	%	
Strain at break MD	> 200	%	
Modulus of elasticity TD	190	MPa	
Modulus of elasticity MD	180	MPa	
Coefficient of friction	0.7		ASTM D 1894
Blocking	< 5	g	
Re-Blocking	30	g	

* Film properties have been measured at 45 µm films .

LDPE L2100TN00

Low Density Poly Ethylene for Blown Film

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 number 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

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Recycling

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Safety

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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.

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LALEH Petrochemical Co.

LDPE L2102TX00

Low Density Poly Ethylene for Blown Film

Application

For general purpose film without additives. used in a wide range of widths and thicknesses for pouches, bags, liners and lamination film.

Additives

Anti oxidant

Typical Data

L2102TX00 is a standard grade produced by the tubular process without additives.

The LPC Polyethylene are supplied in the form of pellets, in bulk or in 25 kg bags. The bags are delivered on shrink-wrapped pallets, with a total weight of 1375 kg per pallet.

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	1.9	dg/min	
Density	921	kg/m ³	
Optical Properties			
Gloss (45°)	50	%	ASTM D 2457
Haze	11	%	ASTM D 1003A
Clarity	29	mV	SABTEC method
Mechanical Properties			
Impact strength	26	kJ/m	ASTM D 4272
Tear strength TD	25	kN/m	
Tear strength MD	60	kN/m	
Tensile test			
Yield stress TD	11	MPa	
Yield Stress MD	13	MPa	
Tensile Stress at break TD	20	MPa	
Strain at break TD	>500	%	
Strain at break MD	>150	%	
Modulus of elasticity TD	200	MPa	
Modulus of elasticity MD	190	MPa	
Coefficient of friction	>1		ASTM D 1894
Blocking	20	g	
Re-Blocking	100	g	

* Film properties have been measured at 25µm films .

LDPE L2102TX00

Low Density Poly Ethylene for Blown Film

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 number 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 customer specifications and needs and to keep up its reputation as a pre-eminent, reliable supplier of e.g. polyethylenes.

Environment

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Food approvals

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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.

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LALEH Petrochemical Co.

LDPE 2004TX37(2004TC37)

Low Density Poly Ethylene for Blown Film

Application

The material is intended for very thin film requiring very good optical properties and is thus mainly applied in general packaging film such as textile packaging.

Additives

Anti oxidant – Anti block – Slip agent

Typical Data

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	4.7	dg/min	
Density	921	kg/m ³	
Formulation			
Slip	900 O	ppm	
Anti block	800	ppm	
Optical Properties			
Gloss (45°)	53	%	ASTM D 2457
Haze	9.5	%	ASTM D 1003A
Clarity	23	mV	SABTEC method
Mechanical Properties			
Impact strength	15	kJ/m	ASTM D 4272
Tear strength TD	30	kN/m	
Tear strength MD	80	kN/m	
Tensile test			
Yield stress TD	11	MPa	
Yield Stress MD	12	MPa	
Tensile Stress at break TD	15	MPa	
Tensile Stress at break MD	27	MPa	
Strain at break TD	>450	%	
Strain at break MD	100	%	
Modulus of elasticity TD	190	MPa	
Modulus of elasticity MD	190	MPa	
Coefficient of friction	0.2		ASTM D 1894
Blocking	< 5	g	
	Re-Blocking		100 g

2004TX37 is a grade produced by the tubular process contains high anti blocking level and slip agents .

The LPC Polyethylene are supplied in the form of pellets,in bulk or in 25 kg bags.The bags are delivered on shrink-wrapped pallets,with a total weight of 1375 kg per pallet.

* Film properties have been measured at 25µm films .

O = oleamide , E = erucamide

LDPE 2004TX37

Low Density Poly Ethylene for Blown Film

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 number 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 customer 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 preservation 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 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.

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 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.



LALEH Petrochemical Co.

LDPE L2102TN42

Low Density Poly Ethylene

Typical Data

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	1.9	dg/min	ISO 1133
Density	921	kg/m ³	ISO 1183 (A)
Optical Properties			
Gloss (45°)	53	%	ASTM D 2457
Haze	11	%	ASTM D 1003A
Clarity	28	mV	DSM method
Formulation Level			
Slip	500 E	ppm	DSM method
Anti block	2300	ppm	DSM method
Anti oxidant	-		
Processing aid (PPA)	-		
Mechanical Properties			
Impact strength	18	kJ/m	ASTM D 4272
Tear strength TD	22	kN/m	ISO 6383-2
Tear strength MD	72	kN/m	ISO 6383-2
Tensile test			ISO R527-1
Yield stress TD	11	MPa	
Yield Stress MD	12	MPa	
Tensile Stress at break TD	18	MPa	
Tensile Stress at break MD	32	MPa	
Strain at break TD	>500	%	
Strain at break MD	>100	%	
Modulus of elasticity TD	200	MPa	
Modulus of elasticity MD	200	MPa	
Coefficient of friction	0.1		ASTM D 1894
Blocking	< 5	g	DSM method
Re-Blocking	30	g	DSM method

General Information

DSM produces low density polyethylene by the tubular and the autoclave reactor processes. As a result the product range covers a wide variety of densities and melt flow rates. Further it includes a large number of grades with excellent optical properties which yield firm with a high to very high clarity.

Finally there is a wide variety of additives. For example, several grades contain the slip agent erucamide. Films produced from these materials have excellent surface properties and very low odour and taste levels, which is of advantage in e.g. food packaging.



LALEH Petrochemical Co.

LDPE 2501TN00

Low Density Poly Ethylene for Blown Film

Application

This additives-free grade combines excellent thin film processability with good optical properties and stiffness, both in blown and cast films. The material is therefore used in diaper film, surface protection film, lamination film and in applications where low blocking behavior without the help of additives is required.

Additives

Anti oxidant

2501TN00 is a standard grade produced by the tubular process without additives with a low gel level.

The LPC Polyethylene are supplied in the form of pellets, in bulk or in 25 kg bags. The bags are delivered on shrink-wrapped pallets, with a total weight of 1375 kg per pallet.

Typical Data

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	0.75	dg/min	
Density	925	kg/m ³	
Optical Properties			
Gloss (45°)	50	%	ASTM D 2457
Haze	10	%	ASTM D 1003A
Clarity	34	mV	SABTEC method
Mechanical Properties			
Impact strength	20	kJ/m	ASTM D 4272
Tear strength TD	30	kN/m	
Tear strength MD	35	kN/m	
Tensile test			
Yield stress TD	12	MPa	
Yield Stress MD	12	MPa	
Tensile Stress at break TD	25	MPa	
Tensile Stress at break MD	28	MPa	
Strain at break TD	> 500	%	
Strain at break MD	> 200	%	
Modulus of elasticity TD	200	MPa	
Modulus of elasticity MD	190	MPa	
Coefficient of friction	0.7		ASTM D 1894
Blocking	< 5	g	
Re-Blocking	20	g	

* Film properties have been measured at 45µm films .

LDPE 2501TN00

Low Density Poly Ethylene for Blown Film

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 number 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.

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LALEH Petrochemical Co.

LDPE 2602TH00

Low Density Poly Ethylene for Blown Film

Application

Special clarity grade without additives but with an increased density. The material is specially developed for application as such or in combination with LLDPE in products like diaper film, underblankets and film for medical applications. The film is characterized by excellent mechanical properties.

Additives

Anti oxidant

Typical Data

2602TH00 is a grade with high optical properties produced by the tubular process without additives with an increased density.

The LPC Polyethylene are supplied in the form of pellets, in bulk or in 25 kg bags. The bags are delivered on shrink-wrapped pallets, with a total weight of 1375 kg per pallet.

Properties	Value	Unit	Test Method
Polymer Properties			
Melt Flow Rate	1.9	dg/min	
Density	926	kg/m ³	
Optical Properties			
Gloss (45°)	61	%	ASTM D 2457
Haze	7.1	%	ASTM D 1003A
Clarity	11	mV	SABTEC method
Mechanical Properties			
Impact strength	15	kJ/m	ASTM D 4272
Tear strength TD	40	kN/m	
Tear strength MD	90	kN/m	
Tensile test			
Yield stress TD	14	MPa	
Yield Stress MD	13	MPa	
Tensile Stress at break TD	20	MPa	
Tensile Stress at break MD	30	MPa	
Strain at break TD	> 500	%	
Strain at break MD	> 150	%	
Modulus of elasticity TD	260	MPa	
Modulus of elasticity MD	240	MPa	
Coefficient of friction	> 1		ASTM D 1894
Blocking	< 5	g	
Re-Blocking	70	g	

* Film properties have been measured at 25µm films .

LDPE 2602TH00

Low Density Poly Ethylene for Blown Film

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