



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
<b>Polymer Properties</b>			
Melt Flow Rate	0.85	dg/min	
Density	921	kg/m <sup>3</sup>	
<b>Formulation</b>			
Slip	700 O	ppm	
Anti block	1100	ppm	
<b>Optical Properties</b>			
Gloss (45°)	49	%	ASTM D 2457
Haze	11	%	ASTM D 1003A
Clarity	37	mV	SABTEC method
<b>Mechanical Properties</b>			
Impact strength	30	kJ/m	ASTM D 4272
Tear strength TD	30	kN/m	
Tear strength MD	40	kN/m	
<b>Tensile test</b>			
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

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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 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.

## 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.