

# PRODUCT DATA SHEET



MFR 0.9  
Density 921 **ETILINAS PETLIN LDPE N109X**

## Low Density Polyethylene

### DESCRIPTION

**ETILINAS PETLIN LDPE N109X** is a low density polyethylene resin for medium duty film applications. It is produced by the state-of-the-art DSM Stamicarbon tubular process. It contains antioxidant (BHT free) additives. It is intended primarily for blown film process. This product meets the United State Food and Drug Administration (US FDA) criteria for food contact use and Commission Regulation (EU).

### CHARACTERISTICS include:

- Low gels
- Good shrink properties
- Good clarity

### APPLICATIONS include:

Medium duty films : thin shrink films, sacks, industrial liners, carrier bags; bubble films; foam sheets; lamination films, agriculture films; surface protection films.

### RECOMMENDED GAUGES:

30 - 150 microns

### TYPICAL DATA:

45 microns film

Product Properties*	Test Method	Units	Value
<b>General Properties</b>			
Melt Flow Rate, I <sub>2</sub>	ASTM D 1238;B @ 190°C, 2.16kg	g/10min	0.9
Nominal Density	ASTM D 792	kg/m <sup>3</sup>	921
Melting Temperature	ASTM D 3417	°C	111
Vicat Softening Temperature	ASTM D 1525 (Load: 1 kg; Heating rate: 50°C/hr)	°C	94
<b>Mechanical Properties</b>			
Tensile Strength at Break, (MD/TD)	ASTM D 882	MPa	26/21
Elongation at Break, (MD/TD)	ASTM D 882	%	244/550
Elmendorf Tear Strength, (MD/TD)	ASTM D 1922	g/25µm	210/185
Dart Impact Strength	ASTM D 1709-15a	g	247
<b>Other Properties</b>			
Clarity	ASTM D 1746	%	90
Gloss (45°)	ASTM D 2457	GU	59
Haze	ASTM D 1003	%	8.4
Coefficient of Friction (COF)	ASTM D 1894	-	0.7

\*The physical properties shown are typical values obtained by averaging a number of test results and small divergence from quoted figures may occur.

## Typical Processing Conditions

Extrusion melt temperature of **ETILINAS PETLIN LDPE N109X** in the range of from 160°C~180°C depending on the type of machine. For blown film, recommended blow-up ratio of 2 to 3 : 1.

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#### REGULATORY

**ETILINAS PETLIN LDPE N109X** complies with the following specification when processed using good extrusion practice:-

- FDA Regulation 21 CFR 177.1520 and CFR 178.2010.
- Commission Regulation (EU) No. 10/2011.
- Complies to heavy metal and phthalate content in accordance to Directive 2011/65/EU (RoHS)
- Does not contain any of the Substances of Very High Concern (SVHC) as identified under Article 33 of Regulation (EC) No 1907/2006 (REACH)
- HALAL certified, JAKIM/(S)/(22.00)/492/2/1 044-03/2011.

#### AVAILABILITY

**ETILINAS PETLIN LDPE N109X** are available 25kg bags. The product type and batch number are clearly marked on each bag.

#### STORAGE/HANDLING

**ETILINAS PETLIN LDPE N109X** should be properly stored in well ventilated environment at a temperature of below 50°C. Prolonged or improper storage can result in deterioration of product properties. The PETRONAS Chemicals Safety Data Sheet (SDS) contains important safety information and should be viewed before using the product.

#### HEALTH & SAFETY

**ETILINAS PETLIN LDPE N109X** is not classified as a dangerous preparation. Please refer to our Safety Data Sheet (SDS) for details on various aspects of safety, recovery and disposal of the product.

#### PRODUCT STEWARDSHIP

PETRONAS aims to increase awareness of all the hazards associated with the storage, handling and use of its products. Thoroughly reviewing the accompanying Safety Data Sheets and disseminating the information to all dependent and interested parties is an essential part of any 'Responsible Care' programme.

#### RELATED DOCUMENTS

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the product.

Safety Data Sheet (SDS)  
Statement on chemicals, regulations and standards  
Statement on compliance to food contact regulations

#### FOR MORE INFORMATION

Please contact **PETRONAS Chemicals Group Berhad (PCG)**, Tower 1, PETRONAS Twin Towers, Kuala Lumpur City Centre, 50088 Kuala Lumpur, Malaysia.

For product queries, kindly email us at [polymer.pcg@petronas.com](mailto:polymer.pcg@petronas.com)



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MS ISO 14001:2004 REG NO. ER0458



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