

## Product Data Sheet

# LEC 1969

Low Density Polyethylene

### Product Description

LEC 1969 is the first commercially proven tubular LDPE grade for extrusion coating in Iran. This product is developed as general purpose application in extrusion coating segments. LEC 1969 can be used on low and also very high line speed extrusion coating and lamination processes. When processes on suitable hardware, LEC 1969 exhibits excellent draw down ability, good edge stability and low neck-in. Due to its excellent draw down ability and good adhesion, very thin coating layers can be applied on the substrate.

### General Information

<b>Status</b>	Commercial: Active		
<b>Application</b>	Extrusion coating- Laminating- Flexible packaging- Paper coating- Cardboard coating- Aluminum foil coating- Multi-layer packaging.		
<b>Form(s)</b>	Pellet		
<b>Attribute</b>	Outstanding melt stability- Robustness in melt drawing- Light weight and very thin coating layer - High speed production line (more than 300 m/min)- Low neck-in		
<b>Additives</b>	Antioxidant: No	Antiblock : No	Slip Agent : No

Typical Properties	Typical Value <sup>1</sup>	Unit	Test Method
<b>Physical</b>			
MFI (190 °C /2.16 Kg )	6.9	dg/min	ISO 1133
Density <sup>2</sup>	919	kg/m <sup>3</sup>	ISO 1183
<b>Mechanical <sup>3</sup></b>			
Stress at Yield	11	MPa	ISO 527-1,2
Stress at Break	12	MPa	ISO 527-1,2
Strain at Break	>600	%	ISO 527-1,2
Tensile Modulus	160	MPa	ISO 527-1,2
Yield Stress (MD/TD)	11/11	MPa	ISO 527-1,3

Tensile Stress at Break (MD/TD)	17/17	MPa	ISO 527-1,3
Strain at Break (MD/TD)	> 700	%	ISO 527-1,3
<b>Extrusion Coating</b>	200	MPa	ISO 527-1,3
Minimum Coating Weight <sup>4</sup>	5	g/m <sup>2</sup>	ASPC Method
Neck-in <sup>5</sup>	140	mm	ASPC Method
<b>Thermal <sup>6</sup></b>			
Vicat Softening Temperature (Method A/10N)	85	°C	ISO 306
Melting Temperature	107	°C	ISO 3146
<b>Recommended Process Conditions <sup>7</sup></b>			
Extruder temperature profile: 200-320°C		Melt Temperature at T-Die: 320°C	

1. Typical values: these are not to be construed as specifications
2. The density parameter was determined on compression-molded specimens, which were prepared in accordance with procedure C of ASTM D4703, Annex A1.
3. Properties are based on 25 µm blown film produced at a melt temperature of 160°C and 3 BUR using 100% LEC 1969.
4. Set temperature: 290 °C
5. Set temperature: 320 °C, Line speed: 310 m/min, Coating: 15 g/m<sup>2</sup>
6. Properties are based on compression-molded specimens, which were prepared in accordance with procedure B of ASTM D4703, Annex A1, using 100% LEC 1969 resin.
7. Please note that, these processing conditions are recommended by producer only for 100% LEC 1969 resin (not in the case of blending with any other compatible material), but because of the many particular factors which are outside our knowledge and control, and may affect the use of product, no warranty is given.

## Further Information

## Health and Safety

The resin is manufactured to the highest standards, but special requirements apply to certain applications such as food end-use contact and direct medical use. Specific information on regulatory compliance can be requested via customer.

Molten polymer may be degraded if it is exposed to air during any of the processing and off-line operations. The products of degradation may have an unpleasant odor. In higher concentrations they may cause irritation of the mucus membranes. Fabrication areas should be ventilated to carry away fumes or vapors. Legislation on the control of emissions and pollution prevention should be observed. Workers should be protected from the possibility of skin or eye contact with molten polymer.

The resin will burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. While burning, the resin contributes high heat and may generate a dense black smoke.

Recycled resins may have previously been used as packaging for, or may have otherwise been in contact with, hazardous goods. Converters are responsible for taking all necessary precautions to ensure that recycled resins are safe for continued use.

The detailed information about safety, handling, individual protection and waste disposal is provided in the relevant Safety Data Sheet. Additional specific information can be requested via customer.



## Conveying

Conveying equipment should be designed to prevent accumulation of fines and dust particles. These particles can, under certain conditions pose an explosion hazard. We recommend that the conveying system will be equipped with adequate filters and be operated and maintained in the way that ensure no leaks develop.

## Storage

Polyethylene resins should be protected from direct sunlight and/or heat during storage. The storage location should also be dry, dust free and the storage temperature should not exceed 40°C. It is also advisable to process polyethylene resins (in pelletized or powder form) within 4 months after delivery, because excessive aging of polyethylene can lead to a deterioration in quality. Arya Sasol Polymer Company would not give any warranty to bad storage conditions which may lead to quality deterioration such as color change, bad smell and inadequate product performance.

The information provided in this Product Data Sheet has been based upon the current level of knowledge and experience. They are not to be interpreted as a warranty for specific product characteristics. In view of the many factors that may affect processing and application, these data do not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. Customer is responsible for determining whether the products and the information in this document are appropriate for customer's use and for ensuring that customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Seller assumes no obligation or liability for the information in this document.

