BF740 LN

ISSUE: 25/04/2022 **ISO 9001 CERTIFIED**

Promyde® BF740 LN is a copolyamide with lubricant and nucleant additives specially formulated for the production of cast and blown film with these advantages:

- Lower oxygen permeability than PA6 at high humidity conditions (Figure 1): extended shelf life (by keeping the polyamide layer thickness) or lighter packaging (by decreasing polyamide layer thickness)
- High transparency
- Lower melt temperature (185ºC): suitable for coextruded films with temperature sensible polymers such as EVOH
- Low crystallization speed, low curling
- Suitable for heat treatments, pasteurization and sterilization processes

Product Specifications	Values	Standard method
Melt Flow Rate (220ºC/5Kg), cc/10min	20-30	ISO1133
Monomer content, %	≤ 0.5	ISO 6427
Moisture content, %	≤ 0,1	NAPPA-032

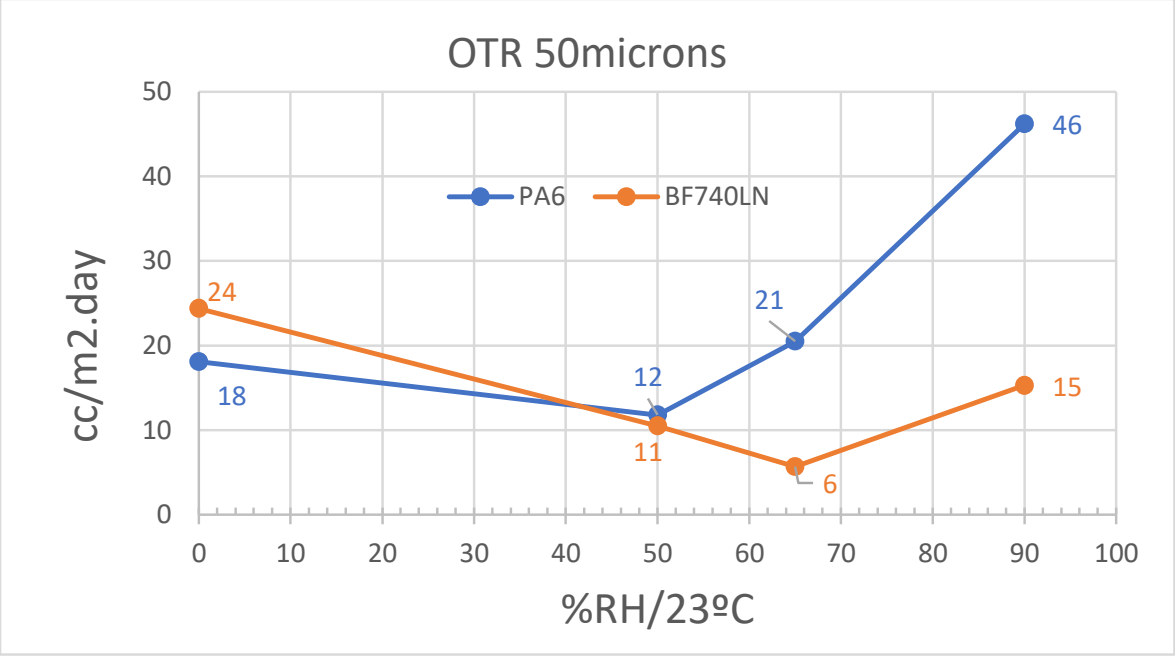
General Properties	Unit	Value	Testing method
Melting point	ºC	185	ISO 3146
Crystallization Temperature	ºC	/	ISO 3146
Density	g/cm^3	1,15	ISO 1148

Nurel S.A.
Ctra. Barcelona km 329
50016 Zaragoza. Spain
T +34 976 465 579
F +34 976 574 108
www.promyde.com

Film Properties [1]	Conditions	Unit	Value	Method
Modulus	MD	MPa	1000	ISO 527-3
Stress at break	MD	MPa	55	ISO 527-3
Elongation at break	MD	%	300	ISO 527-3
Trouser tear strength	MD	N/mm	18	ISO 6383-1
Trouser tear strength	TD	N/mm	17	ISO 6383-1
Puncture energy	MD	mJ	11	ISO 14477
Haze		%	1	ASTM D1003
O_2 transmission rate, 23ºC	50% RH	cc/m^2.d	11	ASTM D3985
	65% RH		6	
	90%RH		15	
Moisture vapor transmission rate, 23ºC	85% RH	g/m^2.d	3	ISO 15106-1

(1) Values were measured on 50μm blown film (BUR: 2.2): the properties like those of all PA films are greatly dependent on manufacturing conditions.

Figure 1: OTR (Oxygen Transmission Rate, cc/m2.day) versus %RH (Relative Humidity) for PA6 and Promyde BF740LN: Monolayer Blown film, 50 microns



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APPLICATIONS

Promyde® BF740 LN is recommended for the production of:

- Extended shelf life (by keeping the polyamide layer thickness) or lighter packaging (by decreasing polyamide layer thickness)
- Coextruded symmetric and asymmetric cast and blown films with very low curling
- Structures with a high resistance to tearing and puncture
- Monomaterial recyclable packaging
- Coextruded films with temperature sensible products (e.g. EVOH)

FORMAT AND STORAGE

Promyde® BF740 LN is supplied in 25Kg moisture-proof packaging. The product should be stored in a dry place and opened just before processing.

PROCESSING GUIDELINES

Drying

Material is supplied pre dried and ready to process. Bags should be stored in a dry place at room temperature. Storage time should not exceed twelve months. Material from open or damaged bags should be dried in a dry-air dryer at 70ºC, the drying time required will depend on the moisture content. Drying temperatures of above 70ºC should be avoided because of possible oxidation.

Extrusion Processing

Promyde® BF740 LN may be processed on standard single-flighted, three-section screws. Better results can be obtained by using high-performance screws equipped with shearing and mixing sections. The screw length should be at least 24D, and preferably 28-33D to guarantee optimum plasticizing and conveying with the high through-put rates of film extrusion (D: screw diameter). A three-section screw should have a compression ratio (ratio of flight depth in the feed section to flight depth in the metering section) of 3:1 to 4:1.

It is recommended the length of screw sections as follows (L: overall length of screw):

Feed section: 0.25 to 0.30 x L

Compression section: 0.15 to 0.25 x L

Metering section: 0.4 to 0.55 x L

Excellent processing and film properties can be obtained by using following temperatures at the extruder:
We recommend to process BF740LN at **220ºC (extruder and adapter).**

Conditioning

Films made of Promyde® BF740 LN will achieve their final dimensions and properties after equilibrium moisture absorption.

Note: All recommendations are based on knowledge and experience. The values have been established on standard tests. The figures should be regarded as guide values and not as binding minimum values. As many factors may affect processing or applications, we recommend that you make tests to determine the suitability of a product for your particular use.

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