

**ISSUE: 22/01/2021**

**ISO 9001 CERTIFIED**

**Promyde® BF640 L** is a new experimental copolyamide with lubricant additive, specially formulated for the production of cast and blown film:

- High transparency
- Lower melt temperature (165°C), suitable for coextruded films with temperature sensible polymers such as EVOH
- Low crystallization speed, low curling in asymmetrical coextruded films
- Low modulus, high deformation at break, excellent tear and puncture resistance
- Sealing starting at 110-130°C (depending on the sealing equipment), possible design of a monolayer recyclable packaging
- Higher oxygen/CO<sub>2</sub> permeability, specially recommended for cheese and other products requiring gas release

Product Specifications	Values	Standard method
Melt Flow Rate (200°C/5Kg), cc/10min	10-25	ISO1133
Monomer content, %	≤ 1	ISO 6427
Moisture content, %	≤ 0,1	NAPPA-032

General Properties	Unit	Value	Testing method
Melting point	°C	165	ISO 3146
Crystallization Temperature	°C	85	ISO 3146
Density	g/cm <sup>3</sup>	1,1	ISO 1148

Film Properties <sup>1</sup>	Conditions	Unit	Value	Method
Modulus	MD	MPa	500-1000	ISO 527-3
Stress at break	MD	MPa	45-55	ISO 527-3
Elongation at break	MD	%	350-450	ISO 527-3
Trouser tear force	MD	N	2-2.5	ISO 6383-1
Trouser tear resistance	MD	N/mm	35-50	ISO 6383-1
Puncture energy	MD	mJ	10-15	ISO 14477
Haze		%	<0.5	ASTM D1003
O <sub>2</sub> transmission rate, 23°C	0% RH		75	ASTM D3985
	50% RH	cc/m <sup>2</sup> .d	60	
	85% RH		90	
Moisture vapor transmission rate, 23°C	85% RH	g/m <sup>2</sup> .d	10	ISO 15106-1
CO <sub>2</sub> transmission rate, 23°C	0%RH	cc/m <sup>2</sup> .d	272	ASTM F2476-13

(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.

## APPLICATIONS

Promyde® BF640 L is recommended for the production of:

- Coextruded symmetric and asymmetric cast and blown films with very low curling
- Monolayer recyclable packaging
- Coextruded films with temperature sensible products (e.g. EVOH)
- Packaging of cheese and other products requiring gas release

## FORMAT AND STORAGE

Promyde® BF640 L 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 60°C, the drying time required will depend on the moisture content. Drying temperatures of above 60°C should be avoided because of possible oxidation.

### Extrusion Processing

Promyde<sup>®</sup> BF640 L 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:

Hopper: 40-50°C

Extruder: 200°C

Adapter & Die: 200°C

### Conditioning

Films made of Promyde<sup>®</sup> BF640 L 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.