ISSUE: 05/11/2012 **ISO 9001 CERTIFIED**

Promyde® BF40 is a high viscosity Polyamide 6 for general extrusion applications and especially for cast film.

Promyde BF40 combines good gas barrier properties and chemical resistance, good mechanical and optical properties along with high abrasion resistance and good thermoformability.

Product Specifications	Values	Standard method
Relative viscosity (1% m/v in 96% m/m sulphuric acid, 25ºC)	4 ± 0,1	ISO 1628
Extractable % max.	≤ 1	ISO 6427
Moisture content % max.	≤ 0,1	NAPPA-032

General Properties	Unit	Value	Testing method
Melting point	ºC	220	ISO 3146
Density	g/cm^3	1,13	ISO 1148
Water absorption (23ºC/sat.)	%	9	ISO 62
Moisture absorption (23ºC/50 %RH)	%	3	ISO 62
Apparent density	g/cm^3	0,69	NAPPA-059
Chip size (length-diameter)	Mm	2,5	NAPPA-045

PROMYDE ® is trademark of NUREL, S.A.

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Film Properties [1]	Conditions	Unit	Value	Method
Stress at yield	MD	MPa	34	ISO 527-3
Stress at break	MD	MPa	96	ISO 527-3
Elongation at break	MD	%	350	ISO 527-3
Trouser tear resistance	MD	N/mm	25	ISO 6383-1
Haze	Chill roll temperature 90ºC	%	≤5	ASTM D1003
	Chill roll temperature 50ºC		≤0,5	
Dynamic coefficient of friction	Film/Steel	-	≤0,25	ISO 8295
O_2 transmission rate, 23ºC	0% RH	cc/m².d.atm	25	ASTM D3985
	50% RH		15	
	85% RH		40	
Moisture vapor transmission rate, 23ºC	85% RH	g/m².d	15	ISO 15106-1

(1) Values were measured on 50μm flat film (chill-roll temperature 90ºC): the properties like those of all PA films are greatly dependent on manufacturing conditions.

Packaging	Big bag / Octabin / Silo truck

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CHARACTERISTICS

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APPLICATIONS

Promyde® BF40 is used for the production of mono and coextruded cast and blown films that are suitable for thermoforming. In a multilayer film Promyde® BF40 L assumes the function of a gas and aroma barrier, giving to the film outstanding mechanical properties and thermoformability. The main applications are vacuum packs and thermoformed packs for food such as meat, fish and cheese

FORMAT AND STORAGE

Promyde® BF40 is supplied in moisture-proof packaging. Typical formats are Big Bags, Octabins, 25kg bags, and bulk silo trucks. All containers are perfectly sealed. 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 and containers should be stored in a dry place at room temperature. Storage time should not exceed twelve months. Material from open or damaged containers should be dried in a dry-air dryer at 75 to 80ºC, the drying time required will depend on the moisture content. Drying temperatures of above 80ºC should be avoided because of possible oxidation.

Extrusion Processing

PROMYDE® BF40 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

The following processing temperatures are recommended:

Feed section: 230-240ºC
Compression section: 250-265ºC
Metering section: 255-265ºC
Die: 255-265ºC

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In cast film the temperature of the casting roll has an important influence on the film properties. If the film has to have a good dimensional stability and strength (such as for cover film) the temperature should be set to 80-120ºC, however for good thermoforming and high transparency to 20-40ºC

Conditioning

Films made of PROMYDE® BF40 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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