

## Nylon

PET 12μ / ALU 9μ / NYLON 15μ / PE 80μ

### Description

Multi-layer material with high protection and resistance, provided with a high barrier from UV Rays, heat and oxygen. It is more resistant to mechanical stress and allows to realize metallic details.

### Choose it for

Food products that need protection from UV rays and heat such as coffee, solubles, snacks containing chocolate, etc. Recommended for flours and powders packaging thanks to the strength of the material.

### Advantages

High brilliance, it protects from oxygen, high resistance, heat and UV rays, keeps aroma, extends the shelf life.

## MATERIAL COMPOSITION

Multi-layered glossy aluminium and nylon film  
n. 4 Layers



- 1** PET  
**Exterior layer**  
External film that protects inks and the barrier, ensuring high resistance
- 2** ALU  
**Intermediate barrier film**  
UV rays, heat, oxygen protection to prolong product's shelf life
- 3** NYLON  
**Reinforcing intermediate layer**
- 4** PE  
**Sealing inner layer**

## PHYSICO-CHEMICAL PROPERTIES

## UNIF OF MEASURE

## PET

## ALU

## NYLON

## PE

Nominal thickness	my	12	9	15	80
Total nominal thickness	my		~ 116		
Tolerance on total thickness	%		10		
Density	g / cm3	1,4	2,71	1,15	0,92
Weight per square metre	g.m2	16,80	24,39	17,25	73,60
Total basis weight	g.m2		~ 132,04 ± 10%		
Tensile strength	N.mm2	210	140	210	25
Lengthening	%	90	1	120	635
Max. shrinkage	%	2	1	1,5	-
Max friction coefficient	-	0,6	0,5	0,5	0,20
Total friction coefficient	-		0,20		
Surface tension	dyne / cm	54	40	54	42
Minimum seal temperature	°C	-	-	-	~ 110
Sealing resistance	N/ 15 mm	-	4	4	3
Treatment	n.a.	Corona	-	Bx	Saldante
Permeability O2 multi-layer	23°C 0% rh - cm3 / m2 day bar		ASTM D 3985: < 0,01		
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m2 day		ASTM F 1249: < 0,01		

It contains about gr 5.7 of bicomponent polyurethanic adhesive and about gr 1,5 of ink

n.a. not applicable

### CONCLUSIVE EXPLANATION:

The information contained in this publication is accurate to the best of our current knowledge. All the materials used for the production of this are in compliance with Italian law and European regulations concerning use in contact with food. We declare that no waste and / or post-consumer materials are used for production. This plastic film must be preserved from direct light and a temperature below 25 ° C, it must be used within 6 months from the date of production. After the period and / or the non-observance of the conservation requirements, the above performance will lapse as well as the declared standards.

LIMITATION OF USE: NO HEATING IN MICROWAVES, NOT PASTEURISATION AT TEMPERATURE > 100 ° C, NO FROSTING AT TEMPERATURE < -25 ° C

### LEGEND:

ASTM E 252: test method for the evaluation of the thickness of the film through the weight  
ISO 1183: test method for determining the density of plastic materials  
UNI EN ISO 527-1 and -3: method for determining the traction properties of the general part and films and slabs  
ASTM D 2732: test method for linear thermal shrinkage of films and sheets  
ASTM D 1894: test method for measuring the friction coefficient of plastic films and sheets  
ASTM D 2578: test method for surface measurement or wetting of polyolefin films  
ASTM F 88: test method for the resistance of flexible plastic film welds  
ASTM D 3985: test method for oxygen transmission speed through plastic films  
ASTM F 1249: Test method for water vapor transmission speed through plastic films  
W.V.T.R. \*: water vapor transmission rate (water vapor transmission speed)