

# Transparent Glossy

## Transparent Glossy

PET 12 $\mu$  / PE EVOH PE 90 $\mu$

### Description

High transparent material that allows to create windows on the bag to make the product inside visible. The material is provided with high oxygen protection (EVOH), keeps aroma and protects from moisture.

### Choose it for

Food products ( like pasta, biscuits, baked goods, candy, cereal grains, dried food and ready meals ) that don't need protection from UV rays and heat, clothing and accessories, fancy goods, tobacco or hemp, chemical products.

### Advantages

High transparency, it protects from oxygen, keeps aroma, extends the shelf life.

### Material composition



Multi-layered transparent film  
n. 2 Layers

- ① **PET**  
Exterior layer  
External film that protects inks and the barrier, ensuring high resistance
- ② **EVOH**  
Intermediate barrier film  
Oxygen protection to prolong product's shelf life
- ③ **PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIT OF MEASURE	TEST METHOD	PET	PE EVOH PE
Nominal thickness	my	ASTM E 252	12	90
Tolerance on nominal thickness	%	ASTM E 252	4	7
Total thickness	my	ASTM E 252		102
Tolerance total thickness	%	ASTM E 252		8
Density	g / cm <sup>3</sup>	ISO 1183	1,4	0,92
Weight per square metre	g / m <sup>2</sup>	Giflex n° 1	16,8	82,8
Total basis weight	g / m <sup>2</sup>	Giflex n° 1		99,6
Tensile strength	N x mm <sup>2</sup>	UNI EN ISO 527	210	20
Lengthening	%	UNI EN ISO 527	90	> 260
Max thermal withdrawal	%	ASTM D 2732	2	-
Max friction coefficient	-	ASTM D 1894	0,6	0,25
Friction coefficient coupled int/int	-	ASTM D 1894		0,22
Surface tension	dyne / cm	ASTM D 2578	52	> 38
Minimum seal temperature	°C	ASTM F 88	-	130
Sealing resistance	N/ 15 mm	ASTM F 88	-	3,0
Treatment	n.a.	n.a.	Corona	Barrier af
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985		< 2
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249		< 3,5

It contains about gr 1,9 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 > 87 ° 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)

## Glossy

PET 12 $\mu$  / PE EVOH PE BL 90 $\mu$

### Description

Shiny and covering effect with glossy white finish. The material is provided with high oxygen protection ( EVOH ), keeps aroma and protects from moisture.

### Choose it for

Food products ( like pasta, biscuits, baked goods, candy, cereal grains, dried food and ready meals ) that don't need protection from UV rays and heat, clothing and accessories, fancy goods, tobacco or hemp, chemical products.

### Advantages

High brilliance, it protects from oxygen, keeps aroma, extends the shelf life.

### Material composition



Multi-layered white glossy film  
n. 2 Layers

- ① **PET**  
Exterior layer  
External film that protects inks and the barrier, ensuring high resistance
- ② **EVOH**  
Intermediate barrier film  
Oxygen protection to prolong product's shelf life
- ③ **PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIT OF MEASURE	TEST METHOD	PET	PE EVOH PE BL
Nominal thickness	my	ASTM E 252	12	90
Tolerance on nominal thickness	%	ASTM E 252	4	8
Total thickness	my	ASTM E 252		102
Tolerance total thickness	%	ASTM E 252		6
Density	g / cm <sup>3</sup>	ISO 1183	~ 1,4	~ 0,92
Weight per square metre	g / m <sup>2</sup>	Giflex n° 1	~ 16,8	~ 82,8
Total basis weight	g / m <sup>2</sup>	Giflex n° 1		~ 99,6
Tensile strength	N x mm <sup>2</sup>	UNI EN ISO 527	> 210	> 20
Lengthening	%	UNI EN ISO 527	> 50	> 250
Max thermal withdrawal	%	ASTM D 2732	2	-
Max friction coefficient	-	ASTM D 1894	0,6	0,25
Friction coefficient coupled int/int	-	ASTM D 1894	DA 0,20 A 0,30	
Surface tension	dyne / cm	ASTM D 2578	52	> 38
Minimum seal temperature	°C	ASTM F 88	-	130
Sealing resistance	N/ 15 mm	ASTM F 88	-	3,0
Treatment	n.a.	n.a.	Corona	EvoH pe BL
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985	~ 4,45	
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249	0,43 - 0,89	

It contains about gr 1,9 of bicomponent polyurethanic adhesive and about gr 1,5 of ink

n.a. not applicable

#### CONCLUSIVE EXPLANATION:

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LIMITATION OF USE: NO HEATING IN MICROWAVES, NOT PASTEURISATION AT TEMPERATURE > 87 ° 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)

## Matte

PET MAT 12 $\mu$  / PE EVOH PE BL 90 $\mu$

### Description

Matte effect material with a covering white finish. The material is provided with high oxygen protection (EVOH), keeps aroma and protects from moisture.

### Choose it for

Food products ( like pasta, biscuits, baked goods, candy, cereal grains, dried food and ready meals ) that don't need protection from UV rays and heat, clothing and accessories, fancy goods, tobacco or hemp, chemical products.

### Advantages

High matte effect, it protects from oxygen, keeps aroma and extends the shelf life.

### Material composition



Multi-layered matte film  
n. 2 Layers

- ① **PET MAT**  
Exterior layer  
External film that protects inks and the barrier, ensuring high resistance
- ② **EVOH**  
Intermediate barrier film  
Oxygen protection to prolong product's shelf life
- ③ **PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIT OF MEASURE	TEST METHOD	PET MAT	PE EVOH PE BL
Nominal thickness	my	ASTM E 252	12	90
Tolerance on nominal thickness	%	ASTM E 252	4	8
Total thickness	my	ASTM E 252	102	
Tolerance total thickness	%	ASTM E 252	6	
Density	g / cm <sup>3</sup>	ISO 1183	~ 1,4	~ 0,92
Weight per square metre	g / m <sup>2</sup>	Giflex n° 1	~ 16,8	~ 82,8
Total basis weight	g / m <sup>2</sup>	Giflex n° 1	~ 99,6	
Tensile strength	N x mm <sup>2</sup>	UNI EN ISO 527	> 210	> 20
Lengthening	%	UNI EN ISO 527	> 50	> 250
Max thermal withdrawal	%	ASTM D 2732	2	-
Max friction coefficient	-	ASTM D 1894	0,6	0,25
Friction coefficient coupled int/int	-	ASTM D 1894	DA 0,20 A 0,30	
Surface tension	dyne / cm	ASTM D 2578	52	> 38
Minimum seal temperature	°C	ASTM F 88	-	130
Sealing resistance	N/ 15 mm	ASTM F 88	-	3,0
Treatment	n.a.	n.a.	Corona	EvoH pe BL
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985	~ 4,45	
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249	0,43 - 0,89	

It contains about gr 1,9 of bicomponent polyurethanic adhesive and about gr 1,5 of ink

n.a. not applicable

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LIMITATION OF USE: NO HEATING IN MICROWAVES, NOT PASTEURISATION AT TEMPERATURE > 87 ° 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)

# Transparent Matte

## Transparent Matte

PET MAT 12 $\mu$  / PE EVOH PE 90 $\mu$

### Description

Transparent matte material that allows to create window on the bag to make the product inside visible. The material is provided with high oxygen protection (EVOH), protects from moisture.

### Choose it for

Food products ( like pasta, biscuits, baked goods, candy, cereal grains, dried food and ready meals ) that don't need protection from UV rays and heat, clothing and accessories, fancy goods, tobacco or hemp, chemical products.

### Advantages

High matte effect, it protects from oxygen, keeps aroma and extends the shelf life.

### Material composition



Multi-layered transparent mat film  
n. 2 Layers

- ① **PET MAT**  
Exterior layer  
External film that protects inks and the barrier, ensuring high resistance
- ② **EVOH**  
Intermediate barrier film  
Oxygen protection to prolong product's shelf life
- ③ **PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIT OF MEASURE	TEST METHOD	PET MAT	PE EVOH PE
Nominal thickness	my	ASTM E 252	12	90
Tolerance on nominal thickness	%	ASTM E 252	4	7
Total thickness	my	ASTM E 252		102
Tolerance total thickness	%	ASTM E 252		8
Density	g / cm <sup>3</sup>	ISO 1183	1,4	0,92
Weight per square metre	g / m <sup>2</sup>	Giflex n° 1	16,8	82,8
Total basis weight	g / m <sup>2</sup>	Giflex n° 1		99,6
Tensile strength	N x mm <sup>2</sup>	UNI EN ISO 527	210	20
Lengthening	%	UNI EN ISO 527	90	> 260
Max thermal withdrawal	%	ASTM D 2732	2	-
Max friction coefficient	-	ASTM D 1894	0,6	0,25
Friction coefficient coupled int/int	-	ASTM D 1894		0,22
Surface tension	dyne / cm	ASTM D 2578	52	> 38
Minimum seal temperature	°C	ASTM F 88	-	130
Sealing resistance	N/ 15 mm	ASTM F 88	-	3,0
Treatment	n.a.	n.a.	Corona	Barrier af
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985		< 2
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249		< 3,5

It contains about gr 1,9 of bicomponent polyurethanic adhesive and about gr 1,5 of ink

n.a. not applicable

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LIMITATION OF USE: NO HEATING IN MICROWAVES, NOT PASTEURISATION AT TEMPERATURE > 87 ° 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)

# Recyclable Paper

## Recyclable Paper

WHITE PAPER 70gr / PE EVOH PE 60μ

### Description

Recyclable material produced with a prevalent paper layer compared to the inner plastic layer, therefore it has a low environmental impact. The material is made with a layer that protects from oxygen and moisture.

### Choose it for

Food products that don't need protection from UV rays and heat, clothing and accessories, fancy goods, tobacco or hemp, chemical products or just if you want to obtain a natural effect and choose a green packaging.

### Advantages

Natural texture, pleasing to the touch, it protects from oxygen, keeps aroma, extends the shelf life.

### Material composition



Multi-layered recyclable paper film  
n. 2 Layers

- ① **WHITE PAPER**  
Exterior layer  
External film that protects inks and the barrier, ensuring high resistance
- ② **EVOH**  
Intermediate barrier film  
Oxygen protection to prolong product's shelf life
- ③ **PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIT OF MEASURE	TEST METHOD	WHITE PAPER	PE EVOH PE
Nominal thickness	my	ASTM E 252	-	60
Tolerance on nominal thickness	%	ASTM E 252	-	8
Total thickness	my	ASTM E 252	-	-
Tolerance total thickness	%	ASTM E 252	-	-
Density	g / cm <sup>3</sup>	ISO 1183	-	0,927 ± 0,002
Weight per square metre	g / m <sup>2</sup>	Giflex n° 1	70 ± 0,1	55,62 ± 0,2
Total basis weight	g / m <sup>2</sup>	Giflex n° 1	~125,62 ± 0,2	-
Tensile strength	N x mm <sup>2</sup>	UNI EN ISO 527	-	21 ± 4
Lengthening	%	UNI EN ISO 527	-	440 ± 60
Max thermal withdrawal	%	ASTM D 2732	-	-
Max friction coefficient	-	ASTM D 1894	-	0,30
Friction coefficient coupled int/int	-	ASTM D 1894	0,30 ± 0,03	-
Surface tension	dyne / cm	ASTM D 2578	-	> 36
Minimum seal temperature	°C	ASTM F 88	-	≥ 135
Sealing resistance	N/ 15 mm	ASTM F 88	-	3,0 ± 0,5
Treatment	n.a.	n.a.	-	Peelable
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985	< 3	-
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249	~12	-

It contains about gr 1,9 of polyurethanic adhesive

n.a. not applicable

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LIMITATION OF USE: NO HEATING IN MICROWAVES, NOT PASTEURISATION AT TEMPERATURE > 87 ° 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)

# Aluminium Paper

## Aluminium Paper

CARTA 50gr / ALU 9μ / PE 70μ

### Description

Natural texture, pleasant to the touch. The material is provided with high protection from UV rays, heat and oxygen ( aluminium ). The three layers lend more rigidity to the bag compared to other materials.

### Choose it for

Food products that need protection from UV rays and heat such as coffee, dry food, organic baked goods, chocolate or if you want to get a more neutral result, keeping a neutral base for your design.

### Advantages

Natural texture, pleasing to the touch, it protects from oxygen, heat and UV rays, keeps aroma, extends the shelf life.

### Material composition



Multi-layered aluminium paper film  
n. 3 Layers

- 1 PAPER**  
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 PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIT OF MEASURE	TEST METHOD	PAPER	ALU	PE
Nominal thickness	my	ASTM E 252	-	9	70
Tolerance on nominal thickness	%	ASTM E 252	-	2	8
Total thickness	my	ASTM E 252		50gr + 79	
Density	g / cm <sup>3</sup>	ISO 1183	-	2,70	0,92
Weight per square metre	g / m <sup>2</sup>	Giflex n° 1	50	24,3	64,4
Total basis weight	g / m <sup>2</sup>	Giflex n° 1		138,7	
Tensile strength	N x mm <sup>2</sup>	UNI EN ISO 527	-	210	-
Lengthening	%	UNI EN ISO 527	-	-	-
Max thermal withdrawal	%	ASTM D 2732	-	2	-
Max friction coefficient	-	ASTM D 1894	-	0,60	0,18
Friction coefficient coupled int/int	-	ASTM D 1894		0,15 - 0,20	
Surface tension	dyne / cm	ASTM D 2578	-	52	> 38
Minimum seal temperature	°C	ASTM F 88	-	-	~ 130
Sealing resistance	N/ 15 mm	ASTM F 88	-	-	3
Treatment	n.a.	n.a.	-	-	Sealing
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985		≤ 0,5	
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249		≤ 0,5	

It contains about gr 1,9 of bicomponent polyurethanic adhesive and about gr 1,5 of ink

n.a. not applicable

#### CONCLUSIVE EXPLANATION:

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LIMITATION OF USE: NO HEATING IN MICROWAVES, NOT PASTEURISATION AT TEMPERATURE > 87 ° 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)

## Metallic

PET 12 $\mu$  / ALU 9 $\mu$  / PE 70 $\mu$

### Description

This material can be used to create metallic effects on the whole packaging or on some areas. It is provided with high protection from UV rays, heat and oxygen ( aluminium ), it is more rigid compare to other materials.

### Choose it for

Food products that need protection from UV rays and heat such as coffee, dry food, organic baked goods, chocolate or if you want to obtain a more neutral result, simulating a laminating effect.

### Advantages

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

### Material composition



Multi-layered glossy aluminium film  
n. 3 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 **PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIF OF MEASURE	TEST METHOD	PET	ALU	PE
Nominal thickness	my	ASTM E 252	12	9	70
Tolerance on nominal thickness	%	ASTM E 252	2	2	8
Total thickness	my	ASTM E 252		~ 91	
Density	g / cm <sup>3</sup>	ISO 1183	1,4	2,71	0,92
Weight per square metre	g / m <sup>2</sup>	Giflex n° 1	16,8	24,39	64,4
Total basis weight	g / m <sup>2</sup>	Giflex n° 1		~105,59 ± 10%	
Tensile strength	N x mm <sup>2</sup>	UNI EN ISO 527	210	140	37
Lengthening	%	UNI EN ISO 527	90	1	440
Max thermal withdrawal	%	ASTM D 2732	2	1	-
Max friction coefficient	-	ASTM D 1894	0,6	0,5	0,22
Friction coefficient coupled int/int	-	ASTM D 1894		~ 0,20	
Surface tension	dyne / cm	ASTM D 2578	52	40	> 38
Minimum seal temperature	°C	ASTM F 88	-	-	~ 130
Sealing resistance	N/ 15 mm	ASTM F 88	-	-	3
Treatment	n.a.	n.a.	Corona	-	-
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985		< 0,05	
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249		< 0,05	

It contains about gr 1,9 of bicomponent polyurethanic adhesive and about gr 1,8 of ink

n.a. not applicable

#### CONCLUSIVE EXPLANATION:

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#### 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 fl exible 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)

# White Paper

## White Paper

PE 60 $\mu$  / PE EVOH PE BL 40 $\mu$

### Description

Monofilm PE material provided with high protection from oxygen and moisture (EVOH) and a less environmental impact. It has a semi matte covering finish that makes less brilliant colours.

### Choose it for

Food products that do not need protection from light and heat, but also clothing and accessories, gifts, tobacco or hemp, items for animals, or simply if you want to get a more natural effect.

### Advantages

Natural texture, it protects from oxygen, keeps aroma, extends the shelf life, low environmental impact.

### Material composition



Multi-layered white recyclable film  
n. 2 Layers

- ① **PE**  
Exterior layer  
External film that protects inks and the barrier, ensuring high resistance
- ② **EVOH**  
Intermediate barrier film  
Oxygen protection to prolong product's shelf life
- ③ **PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIT OF MEASURE	TEST METHOD	PE	PE EVOH PE BL
Nominal thickness	my	ASTM E 252	60	40
Tolerance on nominal thickness	%	ASTM E 252	4	7
Total thickness	my	ASTM E 252	100	
Tolerance total thickness	%	ASTM E 252	10	
Density	g / cm <sup>3</sup>	ISO 1183	0,94	0,92
Weight per square metre	g / m <sup>2</sup>	Giflex n° 1	56,4	36,8
Total basis weight	g / m <sup>2</sup>	Giflex n° 1	93,2	
Tensile strength	N x mm <sup>2</sup>	UNI EN ISO 527	210	20
Lengthening	%	UNI EN ISO 527	90	> 260
Max thermal withdrawal	%	ASTM D 2732	2	-
Max friction coefficient	-	ASTM D 1894	0,60	0,25
Friction coefficient coupled int/int	-	ASTM D 1894	0,22	
Surface tension	dyne / cm	ASTM D 2578	52	> 38
Minimum seal temperature	°C	ASTM F 88	-	~ 115
Sealing resistance	N/ 15 mm	ASTM F 88	-	~ 3,0
Treatment	n.a.	n.a.	-	Barrier BL
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985	6,25	
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249	0,43 - 0,89	

It contains about gr 1,9 of bicomponent polyurethanic adhesive

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 > 87 °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)



# Recyclable Transparent

## Recyclable Transparent

PE 60μ / PE EVOH PE 40μ

### Description

Transparent semi matte monofilm material which makes less brilliant colours, although creates a more natural effect. It allows to create window on the bag to make the product inside visible.

### Choose it for

Food products that don't need protection from UV rays and heat, clothing and accessories, fancy goods, tobacco or hemp, chemical products or just if you want a green plastic packaging.

### Advantages

Natural texture, it protects from oxygen, keeps aroma, extends the shelf life, low environmental impact.

### Material composition



Multi-layered transparent recyclable film  
n. 2 Layers

- 1 PE**  
Exterior layer  
External film that protects inks and the barrier, ensuring high resistance
- 2 EVOH**  
Intermediate barrier film  
Oxygen protection to prolong product's shelf life
- 3 PE**  
Intermediate barrier film

PHYSICO-CHEMICAL PROPERTIES	UNIT OF MEASURE	TEST METHOD	PE	PE EVOH PE
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Tolerance on nominal thickness	%	ASTM E 252	4	7
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Minimum seal temperature	°C	ASTM F 88	-	~ 115
Sealing resistance	N/ 15 mm	ASTM F 88	-	~ 3,0
Treatment	n.a.	n.a.	-	Barrier
Permeability O2 multi-layer	23°C 0% rh - cm <sup>3</sup> / m <sup>2</sup> day bar	ASTM D 3985	6,25	
Permeability W.V.T.R.* multi-layer	38°C 90% rh - g / m <sup>2</sup> day	ASTM F 1249	0,43 - 0,89	

It contains about gr 1,9 of bicomponent polyurethanic adhesive

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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)