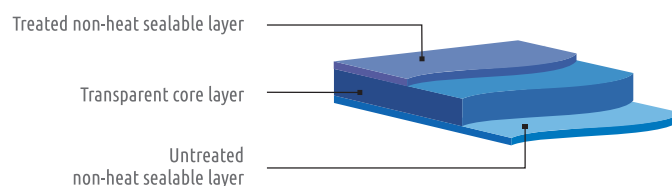


Description

Transparent BOPP label film



Properties		Unit	Limit	Method	Value					
Thickness		μm	±5%	WATERFALL PRO	30	35	40	45	48	50
Density		g/cm ³	±10%		0,91					
Weight m ²		g/m ²	±5%		27,30	31,90	36,40	40,95	43,68	45,50
Tensile strength	MD	N/mm ² (MPa)	not less	ASTM D882 ISO 527 GOST 14236	140					
	TD				280					
Elongation at break	MD	%	not more		200					
	TD			70						
Kinetic coefficient of friction	untreated side/ untreated side	-	±0,10	ASTM D1894 ISO 8295 GOST 27492	0,35					
Shrinkage at 120°C, 5 min	MD	%	not more	ASTM D1204 ISO 11501 GOST 18616	4					
	TD				2					
Heat sealing strength at 130°C, 1 bar, 1 sec	-	N/15 mm	not less	ASTM F88/F88M D882 ISO 527 GOST 27319	non-heat sealable					
Heat sealing temperature	-	°C	-	WATERFALL PRO	non-heat sealable					
Haze	-	%	not more	ASTM D1003 ISO 14782 GOST 15875	2,0					
Gloss	treated side	%	not less	ASTM D2457 ISO 2813	85					
Surface tension	treated side	mN/n (dyn/cm)	not less	ASTM D2578 ISO 8296	38					

MD – Machine Direction; TD – Transverse Direction

Main characteristics

- absence of statics
- excellent optical properties
- high print adhesion
- good slip
- high labeling speed

Application

- for cut-and-stack bottle labels
- for the production of self-adhesive labels at 48-60 μm
- [For labeling machines](#)
- with production speed of 10 000 – 40 000 bottles/hour
- with the use of cold and molten glue

For printing

- high-quality rotogravure and flexographic print
- with the use of special UV-offset and UV-flexo inks with primer coating
- direct or reverse print

Storage

- Films should be stored on the pallets in a closed dry place and should not be exposed to direct sunlight, at a safe distance of not less than 1 m from heating devices or anything that can cause damage the package.
- The film should be kept in workplace not less than 48 hours before being used.
- Guaranteed storage period – 6 months from production date.

Treatment

The guaranteed period for maintaining the minimum permissible level of surface tension on the activated film surface from the date of manufacture, subject to proper storage conditions, is:

- for all film types (except metallized) – 6 months;
- for metallized film – 3 months.

In the interests of minimizing the deterioration of surface dressing level, it is recommended to store the film at a temperature of no higher than 30°C and use it in a short time.

Recycling

In the process of printing and lamination it is recommended to perform corona treatment.

Reeling

- Maximum roll diameter: 800 mm
- Film width in a roll from 290 to 2000 mm
- Diameter of paper cores (inside): 76, 152 mm

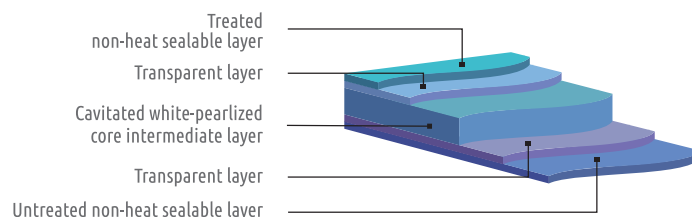
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Description

White-pearlized BOPP label film



Properties	Unit	Limit	Method	Value
Thickness	μm	±5%	WATERFALL PRO	35
Density	g/cm ³	±10%		0,68
Weight m ²	g/m ²	±5%		23,80
Tensile strength	MD	N/mm ² (MPa)	ASTM D882 ISO 527	80
	TD			150
Elongation at break	MD	%	GOST 14236	200
	TD			70
Kinetic coefficient of friction	untreated side / untreated side	-	ASTM D1894 ISO 8295 GOST 27492	0,3
Shrinkage at 120°C, 5 min	MD	%	ASTM D1204 ISO 11501 GOST 18616	4
	TD			2
Heat sealing strength at 130°C, 1 bar, 1 sec	-	N/15 mm	ASTM F88/F88M D882 ISO 527 GOST 27319	non-heat sealable
Heat sealing temperature	-	°C	WATERFALL PRO	non-heat sealable
Optical transmission	-	%	ASTM D1003 ISO 14782 GOST 15875	30
Gloss	treated side	%	ASTM D2457 ISO 2813	85
Surface tension	treated side	mN/n (dyn/cm)	ASTM D2578 ISO 8296	38

MD – Machine Direction; TD – Transverse Direction

Main characteristics

- high print adhesion
- high antistatic properties
- high level of non-transparency and gloss
- good whiteness
- preserves label form
- high labeling speed

Application

- for wrap-around label for PET bottles
- for production of self-adhesive labels at 48-60 μm
[For labeling machines](#)
- with production speed of 10 000 – 40 000 bottles/hour
- with the use of cold and molten glue
[For printing](#)
- high-quality rotogravure and flexographic print
- with the use of special UV-offset and UV-flexo inks with primer coating
- direct

Storage

- Films should be stored on the pallets in a closed dry place and should not be exposed to direct sunlight, at a safe distance of not less than 1 m from heating devices or anything that can cause damage the package.
- The film should be kept in workplace not less than 48 hours before being used.
- Guaranteed storage period – 6 months from production date.

Treatment

The guaranteed period for maintaining the minimum permissible level of surface tension on the activated film surface from the date of manufacture, subject to proper storage conditions, is:

- for all film types (except metallized) – 6 months;
- for metallized film – 3 months.

In the interests of minimizing the deterioration of surface dressing level, it is recommended to store the film at a temperature of no higher than 30°C and use it in a short time.

Recycling

In the process of printing and lamination it is recommended to perform corona treatment.

Reeling

- Maximum roll diameter: 800 mm
- Film width in a roll from 290 to 2000 mm
- Diameter of paper cores (inside): 76, 152 mm

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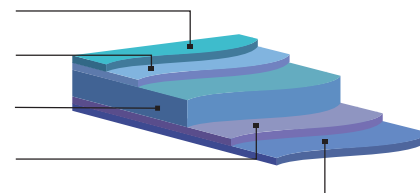
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Description

White-pearlized BOPP label film with high gloss

Treated non-heat sealable layer with high gloss
 Transparent layer
 Cavitated white-pearlized core intermediate layer
 Transparent layer
 Untreated non-heat sealable layer



Properties	Unit	Limit	Method	Value	
Thickness	μm	±5%	WATERFALL PRO	35	38
Density	g/cm ³	±10%		0,68	
Weight m ²	g/m ²	±5%		23,80	25,84
Tensile strength	MD	N/mm ² (MPa)	ASTM D882 ISO 527	75	
	TD			145	
Elongation at break	MD	%	GOST 14236	190	
	TD			65	
Kinetic coefficient of friction	untreated side / untreated side	-	ASTM D1894 ISO 8295 GOST 27492	0,3	
Shrinkage at 120°C, 5 min	MD	%	ASTM D1204 ISO 11501 GOST 18616	4	
	TD			2	
Heat sealing strength at 130°C, 1 bar, 1 sec	-	N/15 mm	ASTM F88/F88M D882 ISO 527 GOST 27319	non-heat sealable	
Heat sealing temperature	-	°C	WATERFALL PRO	non-heat sealable	
Optical transmission	-	%	ASTM D1003 ISO 14782 GOST 15875	30	25
Gloss	treated side	%	ASTM D2457 ISO 2813	85	
Surface tension	treated side	mN/n (dyn/cm)	ASTM D2578 ISO 8296	38	

MD – Machine Direction; TD – Transverse Direction

Main characteristics

- high level of gloss
- high print adhesion
- high antistatic properties
- high level of non-transparency
- preserves label form
- high labeling speed

Application

- for wrap-around label for PET bottles
- for production of self-adhesive labels at 48-60 μm
[For labeling machines](#)
- with production speed of 10 000 – 40 000 bottles/hour
- with the use of cold and molten glue
[For printing](#)
- high-quality rotogravure and flexographic print
- with the use of special UV-offset and UV-flexo inks with primer coating
- direct

Storage

- Films should be stored on the pallets in a closed dry place and should not be exposed to direct sunlight, at a safe distance of not less than 1 m from heating devices or anything that can cause damage the package.
- The film should be kept in workplace not less than 48 hours before being used.
- Guaranteed storage period – 6 months from production date.

Treatment

The guaranteed period for maintaining the minimum permissible level of surface tension on the activated film surface from the date of manufacture, subject to proper storage conditions, is:

- for all film types (except metallized) – 6 months;
- for metallized film – 3 months.

In the interests of minimizing the deterioration of surface dressing level, it is recommended to store the film at a temperature of no higher than 30°C and use it in a short time.

Recycling

In the process of printing and lamination it is recommended to perform corona treatment.

Reeling

- Maximum roll diameter: 800 mm
- Film width in a roll from 290 to 2000 mm
- Diameter of paper cores (inside): 76, 152 mm

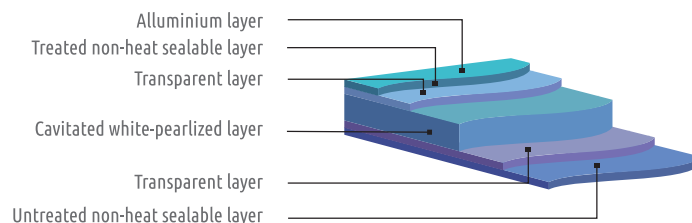
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Description

Metallized on white-pearlized cavitated base BOPP label film



Properties		Unit	Limit	Method	Value			
Thickness*		μm	±5%	WATERFALL PRO	35	38	47	
Density*		g/cm ³	±10%		0,70			
Weight m ² *		g/m ²	±5%		24,50	26,60	32,90	
Tensile strength*	MD	N/mm ² (MPa)	not less	ASTM D882 ISO 527 GOST 14236	80			
	TD				150			
Elongation at break*	MD	%	not more		200			
	TD				70			
Kinetic coefficient of friction	untreated side/ untreated side	-	±0,10		ASTM D1894 ISO 8295 GOST 27492	0,35		
Shrinkage at 120°C, 5 min*	MD	%	not more		ASTM D1204 ISO 11501 GOST 18616	4		
	TD			2				
Heat sealing strength at 130°C, 1 bar, 1 sec*	-	N/15 mm	not less	ASTM F88/F88M D882 ISO 527 GOST 27319	non-heat sealable			
Heat sealing temperature	-	°C	-	WATERFALL PRO	non-heat sealable			
Surface tension**	treated side	mN/n (dyn/cm)	not less	ASTM D2578 ISO 8296	36			
Optical density	treated side	OD	not less	WATERFALL PRO	1,8			

MD – Machine Direction; TD – Transverse Direction

* performance is measured on BOPP film – base for metallization

** guaranteed conservation period of activation on metallized side of film is 3 months from production date specified on identification roll tag

Main characteristics

- extra smooth surface and high gloss of metallized side
- excellent adhesion of aluminium layer
- lowered density and high yield
- high level of transparency
- good whiteness

Application

- for wrap-around label for bottles
- for production of self-adhesive labels
- with production speed of 10 000 – 40 000 bottles/hour
- with the use of cold and molten glue

For printing

- high-quality rotogravure and flexographic print
- with the use of special UV-offset and UV-flexo inks with primer coating
- direct

Storage

- Films should be stored on the pallets in a closed dry place and should not be exposed to direct sunlight, at a safe distance of not less than 1 m from heating devices or anything that can cause damage the package.
- The film should be kept in workplace not less than 48 hours before being used.
- Guaranteed storage period – 6 months from production date.

Treatment

The guaranteed period for maintaining the minimum permissible level of surface tension on the activated film surface from the date of manufacture, subject to proper storage conditions, is:

- for all film types (except metallized) – 6 months;
- for metallized film – 3 months.

In the interests of minimizing the deterioration of surface dressing level, it is recommended to store the film at a temperature of no higher than 30°C and use it in a short time.

Recycling

- It's recommended to use primer when printing on metallized surface.

Reeling

- Maximum roll diameter: 800 mm
- Film width in roll from 290 to 2000 mm
- Diameter of paper cores (inside): 76, 152 mm

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