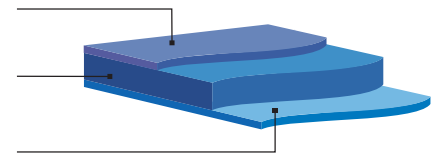


## Description

**BOPP film “tobacco” transparent, with high shrink properties, heat sealable with an average sealing threshold, with a very low coefficient of friction, with activation on one side, for printing and packaging “hard” cardboard packs on high-speed machines**

Untreated heat sealable layer with a very low coefficient of friction  
 Transparent layer  
 Treated heat sealable layer



Properties		Unit	Limit	Method	Value			
Thickness		µm	±5%	ISO 4591, 4593 GOST 17035	16	18	20	25
Density		g/cm <sup>3</sup>	±10%	WATERFALL PRO	0,91			
Weight m <sup>2</sup>		g/m <sup>2</sup>	±5%	GOST 13199	14,56	16,38	18,20	22,75
Tensile strength	MD	N/mm <sup>2</sup> (МПа)	not less	ASTM D882 ISO 527 GOST 14236	140			
	TD				260			
Elongation at break	MD	%	not more	ASTM D1894 GOST 27492	180			
	TD				70			
Kinetic coefficient of friction		UT / UT	-	ASTM D1894 GOST 27492	0,15			
Shrinkage at 130°C, 5 мин	MD	%	±2	ASTM D1204	12			
	TD				12			
Heat sealing strength at 115°C, 1 bar, 1 sec.		T / UT	N/15 mm	not less	ASTM F88/F88M, D882 ISO 527	2,0		
Minimal heat sealing temperature not less than 1H/15mm at 1 bar, sec.		T / UT	°C	-	WATERFALL PRO	105		
Haze		-	%	not more	ASTM D1003 GOST R 8.829	2,8		
Gloss		T	%	not less	ASTM D2457	85		
Surface tension*		T	mN/m (dyn/cm)	not less	ASTM D2578 ISO 8296	38		
MD – machine direction TD – transverse direction		T – treated side UT – untreated side		* to determine the true value, measure after treatment with n-heptane				

### Main characteristics

- activated for printing
- resistant to scratching and abrasion
- low stable coefficient of friction asymmetric, including over heated surfaces
- high hardness
- high gloss
- high transparent

### Application

- for wrapping “hard” paper packs of cigarettes, cigarette blocks, tea, marshmallows, sweets, etc.
- for film tightening of packs due to shrinkable properties of the film
- for tightening packs small and medium sizes

#### For packing

- on the high-speed HFFS packaging machines with a thermotunnel
- on the high-speed HFFS packaging machines without a thermotunnel where the film shrink is able due to heating of the weld seal
- with hot (heat sealing) seal formation
- “hard” paper packs

#### For printing

- high-quality rotogravure and flexographic print
- with the use of special paints

### 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 6 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 500 mm
- film width in a roll from 90 to 450 mm
- diameter of paper cores (inside) 76 mm

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