TBB

OPAQUE

White Opaque Base BOPP Film for Metallization
Heat-sealable
Surface treatment for printing and/or lamination

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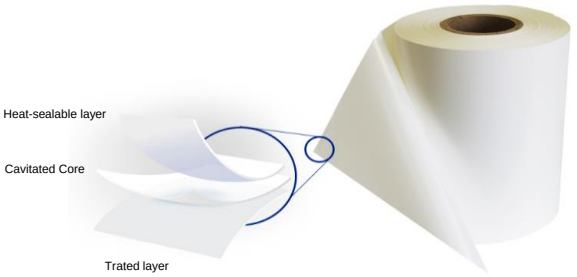
Main Characteristics

- Heat-sealable on the untreated face from 105°C;
- Internal or external surface treatment;
- Excellent optical properties (brightness and opacity).



Typical Applications

- Flexible food packaging: biscuits, snacks, chocolates, cereal bars, labels and decorative applications in general;
- Flexible non-food packaging: monolayer or laminated.

Properties		Methodology	Unit	Range	20TBB	22TBB	26TBB
Physical Properties							
Nominal Thickness *Orientation*		DIN 53370	µm	**Target**	**29.2**	**31.3**	**35.6**
			Gauge	**Target**	**116.8**	**125.0**	**142.5**
Unit Weight		ASTM D 4321	g/m²	**Target**	**20.0**	**22.0**	**26.0**
				Min.	19.0	19.0	19.0
				Max.	21.0	21.0	21.0
			lb/ream	**Target**	**12.3**	**13.5**	**15.9**
				Min.	11.7	11.7	11.7
				Max.	12.9	12.9	12.9
Yield		ASTM D 4321	m²/kg	**Target**	**50.0**	**45.5**	**38.5**
				Min.	47.6	47.6	47.6
				Max.	52.6	52.6	52.6
			in²/lb	**Target**	**35000**	**31818**	**26923**
				Min.	33333	33333	33333
				Max.	36842	36842	36842
Surface Treatment	T	ASTM D 2578	dinas/cm	**Target**	**40**		
				Min.	38		
Coefficient of Friction	NT	ASTM D 1894	-	**Target**	**0.30**		
				Min.	0.20		
				Max.	0.40		
Optical Properties							
Transmittance		ASTM D 1003	%	**Target**	**29**		
				Max.	34		
Gloss (45°)		ASTM D 2457	u.b.	**Target**	**85**		
				Min.	77		
Mechanical Properties							
Tensile Strenght	MD	ASTM D 882	N/mm²	**Target**	**80**		
	TD				**140**		
	MD		lbf/in²	**Target**	**11600**		
	TD				**20300**		
Elongation at Break	MD	ASTM D 882	%	**Target**	**120**		
	TD				**40**		
Shrinkage	MD	ASTM D 1204		**Target**	**3**		
	TD				**1**		
Sealing Range	NT	ASTM F 88	°C	**Target**	**105 - 130**		
			°F	**Target**	**221 - 266**		
Sealing Strenght	NT	ASTM F 88	g/25mm or gf/in	**Target**	**400**	**500**	**600**
				Min.	300		
Barrier Properties							
TPVA | 38°C / 90%UR		ASTM F 1249	g H_2O / (m².dia)	**Target**	**NA**		
WVTR | 100°F / 90%RH		ASTM F 1249	g H_2O / (100in².day)	**Target**	**NA**		
TPO_2 | 23°C / 0%UR		ASTM D 3985	cm³ O_2 / (m².dia)	**Target**	**NA**		
OTR | 73°F / 0%RH		ASTM D 3985	cm³ O_2 / (100in².day)	**Target**	**NA**		

1. Acronyms:
MD: Machine Direction | TD: Transverse Direction;
NT: Non Treated Layer | T: Treated Layer.

2. Additional:
The restrained information in this datasheet represent typical data, and does not constitute genuine warranty liability as far as the product process and or application. In case of doubts or development of other thicknesses or applications, consult your dealer or send e-mail to: contato@polofilms.com.br.

Food Contact Regulations

OPAQUE Family films comply with Mercosul, ANVISA, FDA (Food and Drug Administration) and the European Community legislations for applications involving direct contact with food. Full details are provided in the Declaration of Conformity. Customers intending to use OPAQUE Family films for applications intended to come into contact with food should request a copy of that document from POLO Films.
The MSDS (Material Safety Data Sheet), as well as the evaluation of conformity for contact with food from other legislations are also available upon request. Contact your dealer for any questions.

Storage and Transportation Terms & Conditions

All products are stored and transported in dry, covered and clean environments.
It is recommended that storage and transportation take place at temperature around 30°C and 60% relative humidity.

If the temperature and humidity are not as recommended, the following issues may occur:
- Decreased level of surface treatment, leading to printing and/or lamination difficulties;
- Decreased film transparency;
- Too low CoF, making processing and machinability difficult.

BOPP films are recommended to be kept at operating room temperature for 24 hours before use.

Dimensional Specifications / Product Validity

Width	**Minimum:** 0 mm | **Maximum:** 2 mm (from standard width)
Outer Diameter*	**Minimum:** 30 mm | **Maximum:** 20 mm (from standard diameter)
Core	**Minimum:** 1 mm | **Maximum:** 1 mm (from standard diameter)
Splices per roll	**Maximum:** 2
% of Splices per order	**Maximum:** 30%
Shelf Life (after production)	6 months

* For other dimensional information, consult your dealer.

Polo Films Nomenclature

Unit Weight or Thickness	Technology	Main Feature	Sealing	Treatment
20	T	BB	1	2

Unit Weight / Thickness

Expressed in g/m². Used for white/opaque films;
Expressed in µm. Used for transparent, matte and metallized films.

Technology

T - Tenter | C - Cast | P - BOPET.

Main Feature

BP - Heat-sealable opaque white for printing and/or lamination.

Specialty

BB - White opaque base for metallization.

Sealing

0 - Not Sealable;
1 - Sealing on the Inner Face;
2 - Sealing on the Outer Face;
3 - Sealing on both Sides.

Treatment

0 - No Treatment;
1 - Treatment on Inner Face;
2 - Treatment on Outer Face;
3 - Treatment on both Sides.