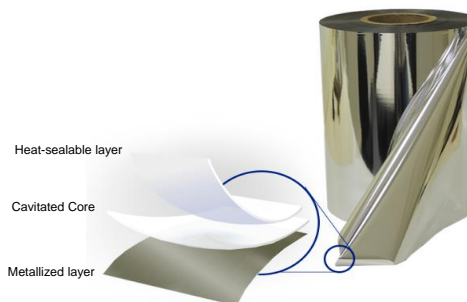


Main Characteristics

- Heat sealable on the non-metallized side from 105°C;
- Metallized surface aiming aesthetic appeal to the product;
- High rigidity and low elongation;
- Metallized cavitated film with very high opacity;
- Excellent performance on high-speed labellers.

Typical Applications

- Beverage labels: water, juices, vegetable oil and yogurt;
- Labels for hygiene products: detergent and softener;
- Continuous labels (WAL Roll Fed), laminated or monolayers;
- Decorative applications in general.



Properties		Methodology	Unit	Range	20TBM	22TBM	26TBM
Physical Properties							
Nominal Thickness <i>Orientation</i>		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	20.9	24.7
				Max.	21.0	23.1	27.3
			lb/ream	Target	12.3	13.5	15.9
				Min.	11.7	12.8	15.2
				Max.	12.9	14.2	16.7
Yield		ASTM D 4321	m²/kg	Target	50.0	45.5	38.5
				Min.	47.6	43.3	36.6
				Max.	52.6	47.8	40.5
			in²/lb	Target	35000	31818	26923
				Min.	33333	30303	25641
				Max.	36842	33493	28340
Surface Treatment	T	ASTM D 2578	dinas/cm	Target	NA		
				Min.	NA		
Coefficient of Friction	NT	ASTM D 1894	-	Target	0.30		
				Min.	0.20		
				Max.	0.40		
Optical Properties							
Optical Density		-	%	Target	≥ 2,0		
Mechanical Properties							
Tensile Strength	MD	ASTM D 882	N/mm²	Target	80		
	TD				140		
	MD		lb/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 Strength	NT	ASTM F 88	g/25mm or gf/in	Target	400	500	600
				Min.	350		
Barrier Properties							
TPVA 38°C / 90%UR		ASTM F 1249	g H ₂ O / (m².dia)	Target	NA		
WVTR 100°F / 90%RH		ASTM F 1249	g H ₂ O / (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;
NA: Not Applicable;
WAL: Wrap Around Label.

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.

Notes:

The use of metallized films in the conversion process is recommended within a maximum period of 2 months from the billing date, in order to minimize the risk of loss of integrity of the metal layer and damage to the barrier properties. Climatic conditions have a very relevant influence on the surface energy of the metallized face. Therefore, we recommend the application of primer or corona treatment on the metallized face before printing or laminating with another substrate.



Food Contact Regulations

METAL 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 METAL 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
20TBM10

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

BM - Heat-sealable metallic white for printing and/or lamination.

Specialty

Not applicable.

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.