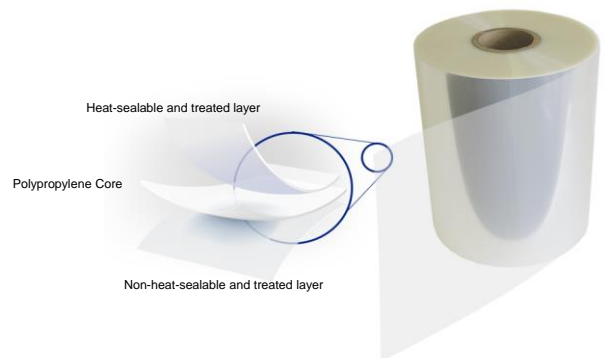


Main Characteristics

- Heat-sealable on one side from 112°C;
- Surface treatment on inner and outer layer;
- Good optical properties (brightness and transparency).

Typical Applications

- Flexible packaging for food: cookies, snacks, chocolate bars and cereal bars;
- Non-food flexible packaging: monolayers or laminate, labels and decorative applications in general.



Properties	Methodology	Unit	Range	20TBH	
Physical Properties					
Nominal Thickness	DIN 53370	µm	Target	20.0	
			Min.	19.0	
			Max.	21.0	
		Gauge	Target	78.7	
			Min.	74.8	
			Max.	82.7	
Unit Weight	ASTM D 4321	g/m ²	Target	18.1	
			Min.	17.2	
			Max.	19.0	
		lb/ream	Target	11.1	
			Min.	10.6	
			Max.	11.7	
Yield	ASTM D 4321	m ² /kg	Target	55.2	
			Min.	52.6	
			Max.	58.2	
		in ² /lb	Target	38844	
			Min.	36994	
			Max.	40888	
Surface Treatment	T	ASTM D 2578	dinas/cm	Target 40 Min. 36	
Coefficient of Friction	T	ASTM D 1894	-	Target	0.35
				Min.	0.30
				Max.	0.40
Optical Properties					
Haze	ASTM D 1003	%	Target	1.8	
			Max.	3.0	
Gloss (45°)	ASTM D 2457	u.b.	Target	95	
			Min.	85	
Mechanical Properties					
Tensile Strength	MD	ASTM D 882	N/mm ²	Target	150
	TD			270	
	MD		lbf/in ²	Target	21756
	TD			39160	
Elongation at Break	MD	ASTM D 882	%	Target	180
	TD			40	
Shrinkage	MD	ASTM D 1204	%	Target	3
	TD			1	
Sealing Range	T	ASTM F 88	°C	Target	112 - 130
			°F	Target	234 - 266
Sealing Strength	T	ASTM F 88	g/25mm or gf/in	Target	450
				Min.	300
Barrier Properties					
TPVA 38°C / 90%UR	ASTM F 1249	g H ₂ O / (m ² .dia)	Target	≤ 8	
WVTR 100°F / 90%RH	ASTM F 1249	g H ₂ O / (100in ² .day)	Target	≤ 0.51	
TPO ₂ 23°C / 0%UR	ASTM D 3985	cm ³ O ₂ / (m ² .dia)	Target	≤ 3000	
OTR 73°F / 0%RH	ASTM D 3985	cm ³ O ₂ / (100in ² .day)	Target	≤ 193	

1. Acronyms:
MD: Machine Direction | TD: Transverse Direction;
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

SEAL 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 SEAL 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
20TBH13

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

BH - Transparent heat-sealable base for metallization with bitrating.

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.