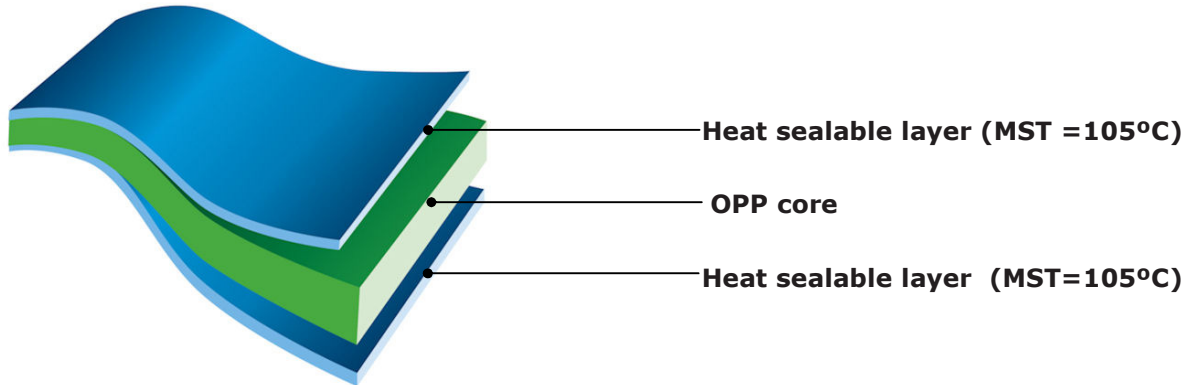




TSO

BoPP transparent film, both sides heat sealable, slip modified, non-treated



PROPERTIES

- Heat sealable on both sides
- Slip modified
- Good mechanical properties
- Good moisture barrier
- Good antistatic properties

TYPICAL APPLICATIONS

- Box and cassette overwrapping

ROLL SIZE AVAILABILITY*

Film	Standard Length (m)	4x (m)	6x (m)	8x (m)
TSO 20	3,200	12,800	19,200	25,600
TSO 25	2,550	10,200	15,300	20,400
TSO 30	2,100	8,400	12,600	16,800
Outside diameter - core 76 mm	305 mm	588 mm	716 mm	825mm
Outside diameter - core 152 mm	337 mm	605 mm	730 mm	838 mm

*Regional availability of roll sizes (multiples of standard length)-please refer to the corresponding Sales Representative

Properties	Method	Unit	Ref.	Typical values		
Nominal thickness	Internal method	µm		20	25	30
Unit weight		g/m ²		18.2	22.8	27.3
Yield		m ² /kg		54.9	44.0	36.6
Tensile strength	ASTM D882	N/mm ²	MD TD	140 280		
Elongation at break		%	MD TD	180 50		
Haze	ASTM D1003	%		2.0	2.3	2.5
Gloss (45°)	ASTM D2457	Gloss Unit		85		
Dynamic cof	ASTM D1894		NT/NT	0.25		
Thermal shrinkage	OPMA TC4(a)	%	MD TD	6.0 3.0		
Heat seal range	Internal method	°C	NT/NT	105-140		
Seal strength	Internal method 130°C ;0.5 s	g/cm		170	230	250
Water vapour permeability	ASTM F1249 (38°C - 90% RH)	g/m ² /d		7.0	6.0	5.0

Tolerance		
Weight	≤ 1.000 kg	± 20%
	1.001-10.000 kg	± 10%
	> 10.000 kg	± 5%

STORAGE, HANDLING AND APPLICATION

TSO film does not require special storage conditions. A storage temperature between 20°C to 30°C is recommended in order to minimise the deterioration of the film properties in general. TSO film is non printable and it is recommended that the film surface should not be treated or modified for adhesion of inks and adhesives. It is advisable to turnover the inventory according to the delivery dates (first in-first out). The film should be conditioned in the operating environment for at least 24 hours before processing. TSO film is suitable for use up to 6 months from the date of production.

INDICATION OF SURFACE TREATMENT

TSO is supplied without treatment (NT).

FOOD CONTACT

TSO film complies with EC and FDA regulations. Specific document and MSDS are available upon request.

The property values represented in the table do not constitute product specifications, but represent the average or typical values. Use of this information is limited to the specific recipient. While the information is accurate to the best of our knowledge as of the date compiled, it is limited to the information as specified. No representation or warranty, expressed or implied, is made regarding the information, or its completeness or fitness to a particular use. The user is solely responsible for all determinations regarding use and we disclaim liability for any loss or damage that may occur from the use of this information. Ti does not guarantee the typical (or other) values.