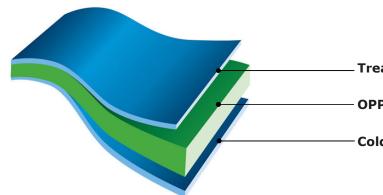


TNR

BoPP transparent film, non heat sealable, improved slip, cold seal release, treated



- Treated layer

OPP core

Cold seal release layer

PROPERTIES

- Improved slip properties
- Excellent optical properties
- Good mechanical properties
- High surface treatment

TYPICAL APPLICATIONS

- Rotogravure and flexographic printing
- Lamination
- Cold seal release film

ROLL SIZE AVAILABILITY*

Film	Standard Length (m)	4x (m)	6x (m)	8x (m)
TNR 15	4,250	17,000	25,500	34,000
TNR 20	3,200	12,800	19,200	25,600
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		μm		15	20
Unit weight	Internal method	g/m²		13.7	18.2
Yield		m²/kg		73.3	54.9
Tensile strength	ASTM D882	N/mm²	MD TD	150 280	
Elongation at break		%	MD TD	150 50	
Haze	ASTM D1003	%		1	.8
Gloss (45°)	ASTM D2457	Gloss Unit		90	
Dynamic cof	ASTM D1894		NT/NT	0.25	
Thermal shrinkage	OPMA TC4(a)	%	MD TD	6.0 2.0	
Treatment level	ASTM D2578	mN/m		3	6
Water vapour permeability	ASTM F1249 (38°C - 90% RH)	g/m²/d		9.0	7.0

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

STORAGE, HANDLING AND APPLICATION

TNR 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. 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. In line refreshment of corona treatment is recommended before processing the film. TNR film is suitable for use up to 6 months from the date of production. If TNR is produced with corona treatment then it is suitable for use up to 3 months from the date of production.

INDICATION OF TREATMENT

TNR film is normally supplied with treatment on the outside surface (TO).

TNR film can be supplied with the treatment on the inside surface (TI). This must be agreed with our sales representative before processing the order.

FOOD CONTACT

TNR 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.