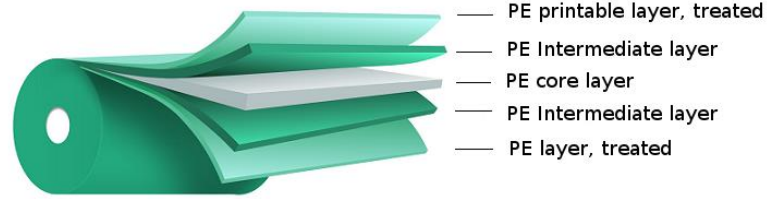




**PNRA21PD** is 5 layer transparent plain BOPE film, LLDPE based . Both side non heat sealable, two side corona treated suitable for flexo printing or to be used as intermediate layer in multilayer structures due to high mechanical properties .

Film density (0.921 g/cm<sup>3</sup>)



**TYPICAL APPLICATIONS**

Suitable for flexo printing : roto printing available using up to date roto machines

Lamination solventless recommended

Single web as substitute of thicker blown PE film – recommended for two layers pillow bags VFFS applications in conjunction with a low sealing blown film to enhance mechanical properties like puncture , Elmendorf and tear resistance

To achieve barrier properties is recommended to be laminated to a PE/Evoh/PE low sealing structure

Properties		Test Methods	Deviation	Typical Values			
Thickness, µm				20	25	30	40
Average thickness deviation, %			±	2.5	2.5	2.5	2.5
Yield, m <sup>2</sup> /kg			± 5%	54.3	43.5	36.2	27.2
Unit weight, g/m <sup>2</sup>			± 5%	18.4	23	27.6	36.8
Gloss (45°)		ASTM D 2457	≥	86	86	86	86
Haze, %		ASTM D 1003	± 1	3.1	3.1	3.1	3.1
Coefficient of Friction*		ASTM D 1894	± 0.05	0.27	0.27	0.27	0.27
Elmendorf Test MD, mN		ASTM D 1938	± 10%	< 500	< 500	< 500	< 500
Tear Test TD, mN							
Tensile strength, MPa		ASTM D 882	± 20	75	75	75	80
MD							
TD				175	175	175	180
Elongation at break, %		ASTM D 882	± 30	320	320	320	320
MD							
TD				70	70	70	70
Shrinkage, %		Internal Method	± 1	3	3	3	3
MD							
100°C – 5 min				5	5	5	5
Surface treatment, dynes/cm		ASTM D 2578a		Min 38	Min 38	Min 38	Min 38

\*- Dynamic COF film/film

The specified values are based on average results, measured by the manufacturer during standard production. They should not be considered as Data Sheet of any particular product. The end user should be satisfied as to the suitability of the product for the intended application and the present regulatory regime. Therefore Plastchim-T AD disclaims any liability for damages arising from the non-suitability of the product for the effected application.



### FOOD CONTACT

The PNRA21PD Film complies with EEC 10/2011 and national and international standards and requirements for food contact. FCC available upon request : MSDS , REACH and other Declarations of Compliance ( RHOS , general absence of given substances . ) are accessible at [www.plastchim-t.com](http://www.plastchim-t.com).

### INDICATION OF PRINTABLE SURFACE

**PNRA21PD** is usually supplied with printable layer on the outside surface, in case of requirement for printable layer inside, this must be agreed with our sales representative before order processing.

### PACKING

	Core Diameter	Outer Diameter *	Notes
<b>Vertical</b>	152 mm (6`) 76 mm (3`)	≤ 550 mm	≤ 700 mm – two or more rows > 700 mm – one row
<b>Horizontal</b>	152 mm (6`) 76 mm (3`)	≤ 770 mm	

(\*) In case of no other requirements

### TOLERANCES

Weight tolerance, depending on the order volume	Width tolerance	Length tolerance
≤ 1 000 kg ± 20%	± 2 mm	±5 %
1001 ÷ 10 000 ± 10%		
>10 000 ± 5%		

### Storage and Transportation Terms & Conditions

Palletizing of goods is done according to customer's requirements.

The storage of all goods is in dry, covered and clean warehouses.

The transportation of the goods is carried out in dry, covered and clean means of transport.

The recommended temperature of storage/transportation is 10-30°C. If the temperature is not within the recommended limits, the following issues may occur:

- Decrease of dyne level
- Higher haze of the film
- Poor adhesion of the film surface that on a later stage could be an issue for laminating and printing
- Extremely low COF that can trouble further processing

Excessive humidity can be a reason for film blocking.

It is recommended that BOPE film should be tempered at operating room temperature for 24 hours before use.

Adherence to the above mentioned storage conditions ensures that the film is suitable to be used up to 6 months after production.

Claims regarding to the transportation are accepted within 1 week after the delivery date. If any, a record has to be taken in the CMR.

**Last update: Edition 1 / 12<sup>th</sup> December 2022**