

crystal

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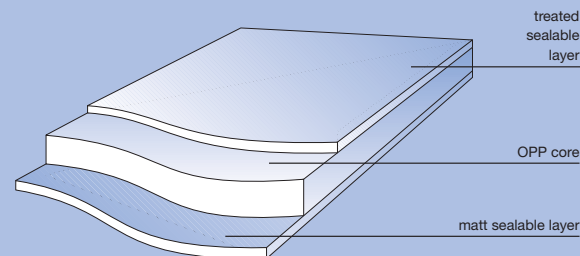
GNR

- Matt finish
- Outstanding printability
- Good machinability
- Low coefficient of friction
- Good mechanical properties



TREOFAN PACKAGING FILM GNR

Heat-sealable bi-oriented co-extruded,
matt OPP film



Treofan GNR offers a wide range of design options due to its matt surface. Treofan GNR can be laminated to Treofan co-extruded films, since the sealable layers are compatible.

PRODUCT FEATURES

Film characteristics:

- high resistance to tear and puncture
- excellent resistance to low temperatures
- dimensionally stable under conditions of varying humidity
- low water vapour permeability
- water-repellent
- physiologically harmless, thus suitable for food packaging

Special properties:

- matt finish
- good anti-static properties
- consistent slip
- high seal integrity

APPLICATIONS AND PROCESSING

Treofan GNR offers the aesthetic appeal of the matt finish of the surface in combination with the sealability and machinability of a transparent co-extruded OPP film.

Printing:

- flexographic and rotogravure printing (half-tone and line)
- sandwich printing of Treofan GNR is widely used in various lamination applications

Laminating:

- adhesive or extrusion lamination with OPP or with other substrates, depending on application

Packaging:

- Treofan GNR is successfully used on a wide range of form, fill and seal machines

Storage:

- place Treofan GNR in the processing area approximately 24 hours prior to processing

Certified according to

DIN EN ISO 9001:2000

Compliance with industrial health and safety standards: Treofan OPP films do not present any significant danger to health and safety in the workplace, provided they are used for the intended purpose in accordance with conventional practices and that health and safety regulations are observed. Relevant guidelines can be found in our safety information.

TECHNICAL DATA (typical values)

Properties	GNR 15	GNR 20	Unit	Measuring method
Nominal thickness	15	20	µm	-
Unit weight	12.8	17.6	g/m ²	ISO 4591
Yield	77.5	56.8	m ² /kg	-
Heat-seal strength	1.8	1.8	N/15mm	Treofan
Coefficient of friction (film/film): matt side (dynamic)	0.25	0.25	-	ISO 8295
treated side (dynamic)	0.20	0.20	-	ISO 8295
Haze	75	75	%	ASTM D 1003
Gloss: matt side	8	8	%	DIN EN ISO 2813
treated side	50	50	%	DIN EN ISO 2813
Tensile strength: machine direction	100	100	N/mm ²	DIN EN ISO 527-1/-3
transverse direction	200	200	N/mm ²	DIN EN ISO 527-1/-3
Elongation at break: machine direction	200	200	%	DIN EN ISO 527-1/-3
transverse direction	50	50	%	DIN EN ISO 527-1/-3
Shrinkage: machine direction	6	6	%	OPMA TC4 (a)
transverse direction	3	3	%	OPMA TC4 (a)
Wettability	36-39	36-39	mN/m	ISO 8296

AVAILABILITY (unprinted film)

Reel length (m):

Packaging film	Standard length	Up to 6-times standard
GNR 15	3,500	21,000
GNR 20	4,400	26,400

Maximum reel outside diameter (mm):

Core diameter	Standard length	Up to 6-times standard
76 mm	approx. 330	-
152 mm	approx. 360	approx. 800

Max. reel width: 2,000 mm (widths > 2,000 mm on request)

Tests have shown that under the prescribed storage conditions the characteristics of Treofan GNR will maintain consistent performance and will be best before use throughout a 6-months period after delivery. Treofan GNR is largely unaffected by climatic influences, but should not be stored at temperatures above 30°C (86°F). The rolls should be kept in their original wrapping until used. After the rolls have been unwrapped, they should be stored safely in horizontal position.

Food Safety

Treofan GNR has been developed specially for packaging foods and meets the specific requirements on health and safety. It meets the FDA and EC regulations, which includes the specific "German Food and Commodity Act" and the current recommendations of the BfR. Compliance with other specific national regulations is available on request.

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