crystal

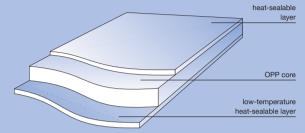
HNA/D

- Low heat-sealing, transparent co-extruded OPP film
- Wide seal range for high-speed **HFFS** machines
- Excellent hot tack
- HNA for non-printed applications with excellent slip properties



TRFOFAN PACKAGING FII M HNA/D

Low heat-sealing, transparent co-extruded OPP film



Treofan HNA/D is a biaxially oriented, co-extruded polypropylene film. Treofan HNA/D has a wide seal range in order to enable highspeed HFFS packaging capability, whilst retaining good hot tack and seal integrity. The film is corona-treated on one side to improve adhesion during printing and lamination.

PRODUCT FEATURES

Physical characteristics:

- high resistance to tear and puncture
- excellent resistance to low temperatures
- dimensionally stable under conditions of varying humidity
- high heat-seal strength

Film characteristics:

- low water vapour permeability
- water-repellent
- resistance to biological oil and biological grease
- odourless and taste-free
- · physiologically harmless, thus suitable for food packaging

Optical characteristics:

- transparent
- low haze
- excellent gloss

Special properties:

- printable
- · good anti-static properties
- tailored and controlled slip properties
- low-temperature heat-sealing on one side

APPLICATIONS AND **PROCESSING**

Treofan HNA/D can be used for packaging various types of products, for example products which need to be protected against moisture or dehydration. Also for packages subject to high mechanical stress such as deep-freeze packs.

Printing:

• flexographic and rotogravure printing (half-tone and line)

Laminating:

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

Packaging:

• as a result of its wide-range sealing surface Treofan HNA/D can be used on high-speed HFFS machines

Storage:

• place Treofan HNA/D 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	HNA/D 20	HNA/D 25	HNA/D 30	HNA/D 35	Unit	Measuring method
Nominal thickness	20	25	30	35	μm	-
Unit weight	18.2	22.8	27.3	31.9	g/m²	ISO 4591
Density	0.91	0.91	0.91	0.91	g/cm³	-
Yield	54.9	43.9	36.6	31.4	m²/kg	-
Heat-seal strength	1.6	2.0	2.0	2.0	N/15 mm	Treofan
Low heat-seal threshold layer	95	95	95	95	°C	Treofan
Coefficient of friction (film/film)	0.3	0.3	0.3	0.3	-	ISO 8295
Wettability	36-39	36-39	36-39	36-39	mN/m	ISO 8296
Haze	1.9	2.0	2.1	2.3	%	ASTM D 1003
Gloss	100	100	100	100	%	DIN EN ISO 2813
Tensile strength: machine direction transverse direction	130 320	130 320	140 320	140 320	N/mm² N/mm²	DIN EN ISO 527-1/-3 DIN EN ISO 527-1/-3
Elongation at break: machine direction transverse direction	190 60	190 60	190 60	190 60	% %	DIN EN ISO 527-1/-3 DIN EN ISO 527-1/-3
Water vapour permeability: 23°C/85% rh 38°C/90% rh	1.3 6.0	1.0 4.4	0.9 3.9	0.8 3.3	g/m²∗d ±10%	ASTM F 1249 ASTM F 1249

Tests have shown that under the prescribed storage conditions the characteristics of Treofan HNA/D will maintain consistent performance and will be best before use throughout a 6-months period after delivery. Treofan HNA/D 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 HNA/D 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.

AVAILABILITY (unprinted film)

Reel length (m):

Packaging film HNA/D 20 HNA/D 25 HNA/D 30	3,800 3,000 2,500	Up to 6-times standard 22,800 18,000 15,000
HNA/D 35	2,200	13,200

8-times standard or other reel lengths available on request

Maximum reel outside diameter (mm):

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

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

The figures and the data provided in this data sheet are consistent with the current state of our knowledge, and are intended to provide general information on our products and their applications. They do not constitute a guarantee of any specific product attributes or the suitability of products for specific applications. Any existing commercial rights or patents must be observed.

HEADOFFICE TREOFAN GROUP

Treofan Germany GmbH & Co. KG

Am Prime Parc 17

65479 Raunheim, Germany Phone: +49 6142 200 0 Fax: +49 6142 200 3299

SALES CONTACTS

Business Team Head Packaging

Phone: +49 6142 200 3265 Fax: +49 6142 200 3299 guido.bisch@de.treofan.com Contact: Guido Bisch

Africa

Phone: +27 11 761 7617 gunnar.vahlenkamp@za.treofan.com Contact: Gunnar Vahlenkamp

Benelux

Phone: +33 5 5660 0994 michel.malet@treofan.com Contact: Michel Malet

Eastern Europe

Phone: +49 6142 200 3263 peter.breburda@de.treofan.com Contact: Peter Breburda

Export Treofan Group Phone: +34 93 306 8327 ignacio.velez@es.treofan.com Contact: Ignacio Velez

Germany/Switzerland/Austria Phone: +49 6142 200 3402

urs.ulrich@de.treofan.com Contact: Urs Ulrich Iberica

Phone: +34 93 306 8327 ignacio.velez@es.treofan.com Contact: Ignacio Velez

Italy

Phone: +39 02 6796 3602 sergio.arcari@it.treofan.com Contact: Sergio Arcari

Mexico/Latin America

Phone: +52 436 363 8044
Phone: +52 436 363 8115
alfonso.flores@mx.treofan.com
Contact: Alfonso Flores

United Kinadom

Phone: +44 1793 34 4004 carey.ashworth@uk.treofan.com Contact: Carey Ashworth

USA/Canada

Phone: +1336 766 9448 grant.gustafson@us.treofan.com Contact: Grant Gustafson

