# shield

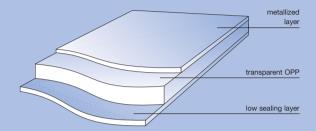
## HSM

- Co-extruded metallized OPP film
- For high-speed packaging



## TREOFAN PACKAGING FILM HSM

Polypropylene coextruded metallized film



Treofan HSM offers a very high degree of brilliance together with great performances in extremely high packaging speed and/or frequent changes in machine running conditions. The strong metal anchorage and high surface tension of Treofan HSM ensure excellent inter-ply bond strength when laminated to other plastic films or paper.

Optical and barrier properties are at the same level of Treofan metallized coextruded standard film.

### PRODUCT FEATURES

#### Main properties:

- very wide sealing range
- high barrier to humidity, visible and not visible radiation
- outstanding machineability
- good optical properties

## APPLICATIONS AND PROCESSING

Treofan HSM can be used for packaging various types of products at high speed or using low sealing temperatures. For example products which need to be protected against moisture, dehydration or light.

#### Printing:

- flexographic and rotogravure printing (half-tone and line) and sandwich printed in laminates
- in order to achieve good ink adhesion, we recommend the use of a primer in line in the conversion operation.
   We also recommend the use of a lacquer to protect the metal surface on partially printed single webs

#### Laminating:

 suitable for adhesive lamination with OPP or with other substrates, depending on application

#### Packaging:

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

#### Storage:

 place Treofan HSM 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	HSM 18	HSM 25	Unit	Measuring method
Unit weight	16.4	22.7	g/m²	ISO 4591
Heat-seal range	85 –140	85 –140	°C	Treofan
Seal strength	1.8	2.2	N/15 mm	Treofan
Optical density	2.2	2.2	-	Gretag Macbeth D 200-II
Coefficient of friction (film/film, dynamic)	0.3	0.3	-	ISO 8295
Tensile strength: machine direction transverse direction	120 300	120 300	N/mm² N/mm²	DIN ISO 527-1/-3 DIN ISO 527-1/-3
Elongation at break: machine direction transverse direction	220 55	220 55	% %	DIN ISO 527-1/-3 DIN ISO 527-1/-3
Water vapour permeability: 23°C/85% rh 38°C/95% rh	0.2 0.8	0.2 0.8	g/m²∗24h g/m²∗24h	DIN 53122 ASTM F 1249
Oxygen permeability: 23°C/0% rh	60	60	cm <sup>3</sup> /m <sup>2</sup> *24h atm	ASTM D 1434

AVAILABILITY (unprinted film)

Reel length (m):

 Packaging film
 Standard length
 Up to 6-times standard

 HSM 18
 3,900
 23,400

 HSM 25
 2,800
 16,800

Maximum reel outside diameter (mm):

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

Maximum reel width: 2,000 mm

Standard condition: metallization on the internal side

(metallization on the external side under special agreement only)

Tests have shown that under the prescribed storage conditions the characteristics of Treofan HSM will maintain consistent performance and will be best before use throughout a 3-months period after delivery. Treofan HSM 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 HSM 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. It is not recommended that the metallized surface is used in direct contact with food.

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

#### CONTAC

communications@treofan.com

#### NEORMATION

www.treofan.com

