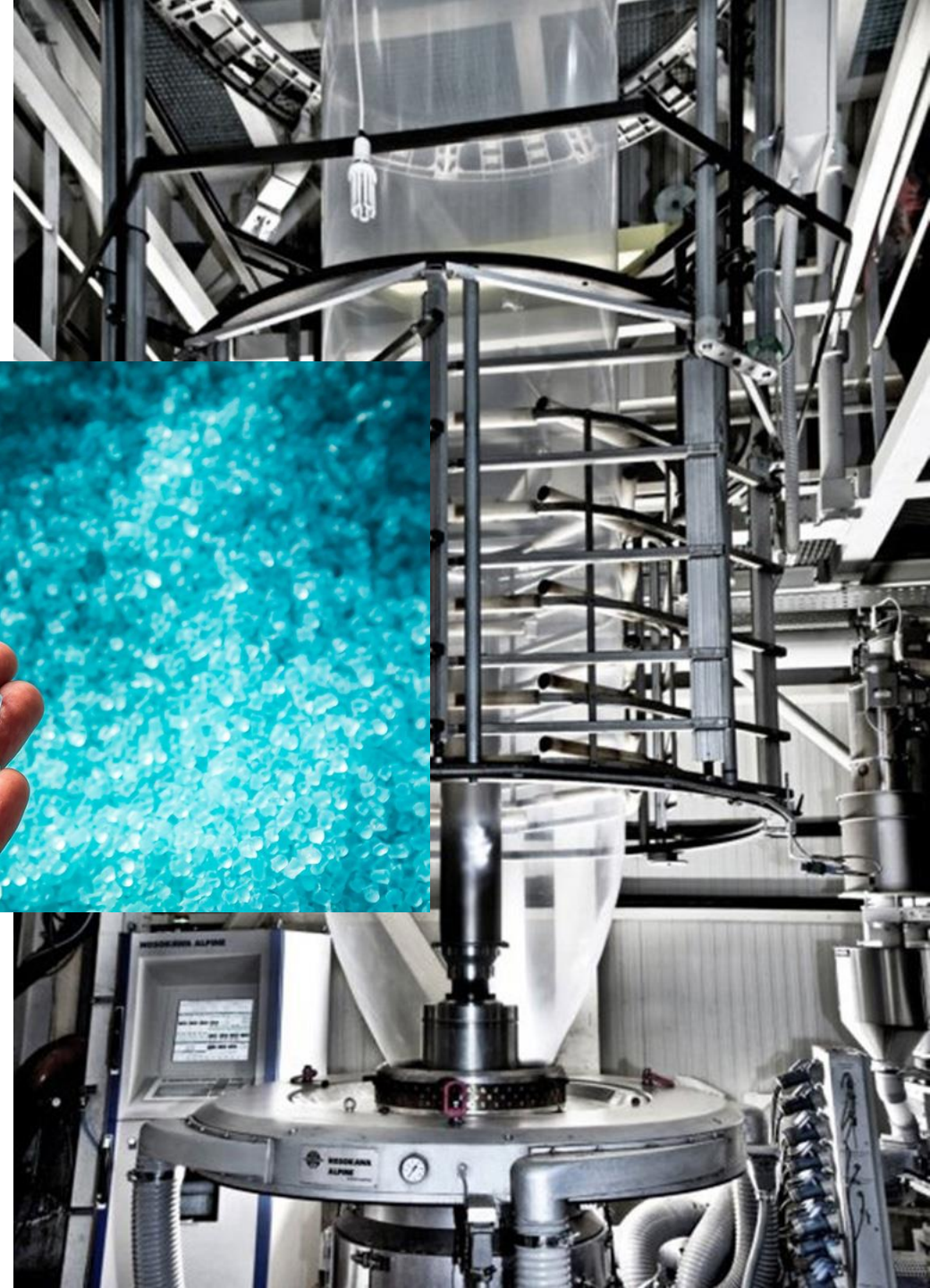


EUROfilm

MANTZARIS S.A.

PLASTIC FILM INDUSTRY

The Art of Plasticity



Mantzaris S.A in a Nutshell

**WE DO
HAVE
PLASTIC
MINDS**

- Agricultural products
- Packaging products
- Consumer products



MANTZARIS S.A.
PLASTIC FILM INDUSTRY



126
employees



~ 5%
Avg Annual Growth



1991
Established



24 M Euros
2018



HEADQUARTERS
Zevgolatio, Korinthias
Exports Office
Athens Greece



2.6 M Euros
CAPEX 2019

3 BUSINESS SEGMENTS

Flexible
Packaging

~50%



Agricultural
Products
~30%



Consumer
Products
~20%

Production Equipment

- ☐ 7 blown-film extrusion lines
- ☐ 5 blown-film co-extrusion lines
- ☐ 4 Waste bag production lines
- ☐ 1 Product line of drip pipe
- ☐ 2 bottom weld sack machines
- ☐ 3 Carrier-bag production lines
- ☐ 1 recycling line



Rely on a strategic partner

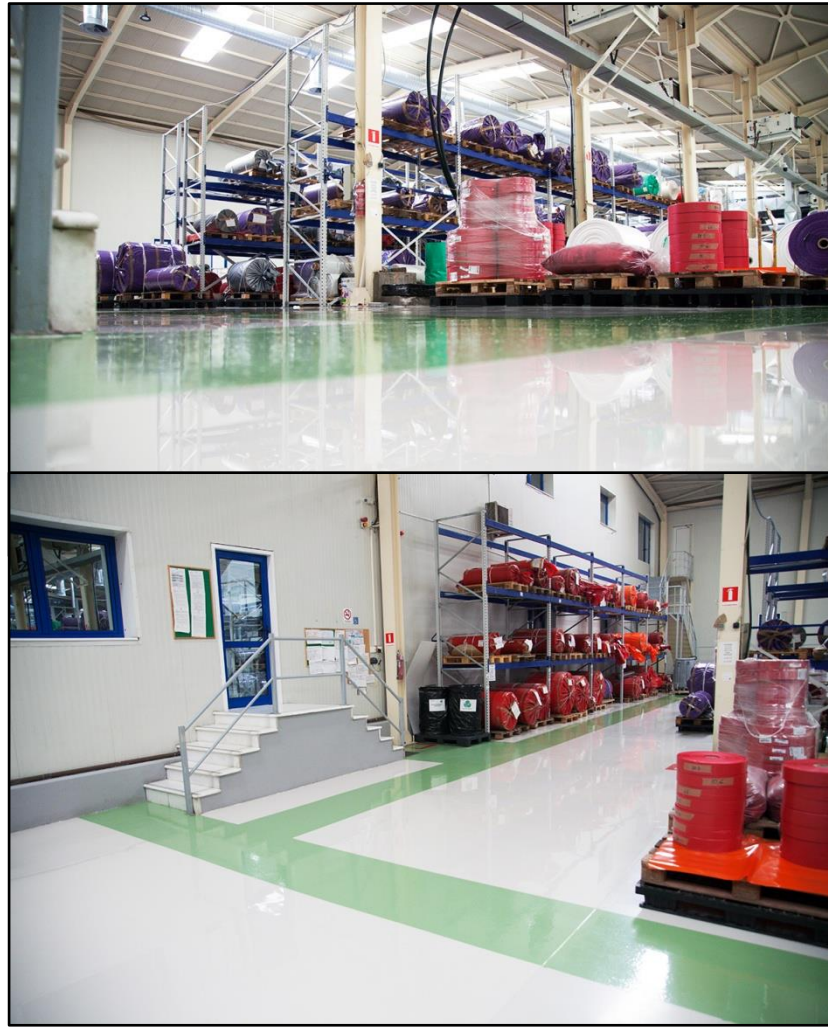
- Nominal Capacity of 17.000tns of PE production annually
- Tailor Made solutions based on customer's needs
- Constant investment for new state of the art production lines and R&D
 - 2 Alpina Hosokawa 3 layer
 - 1 Alpina Hosokawa MDO
 - 1 Reifenhauser 3 layer line
- Strick Quality assurance protocols



Environmental Footprint



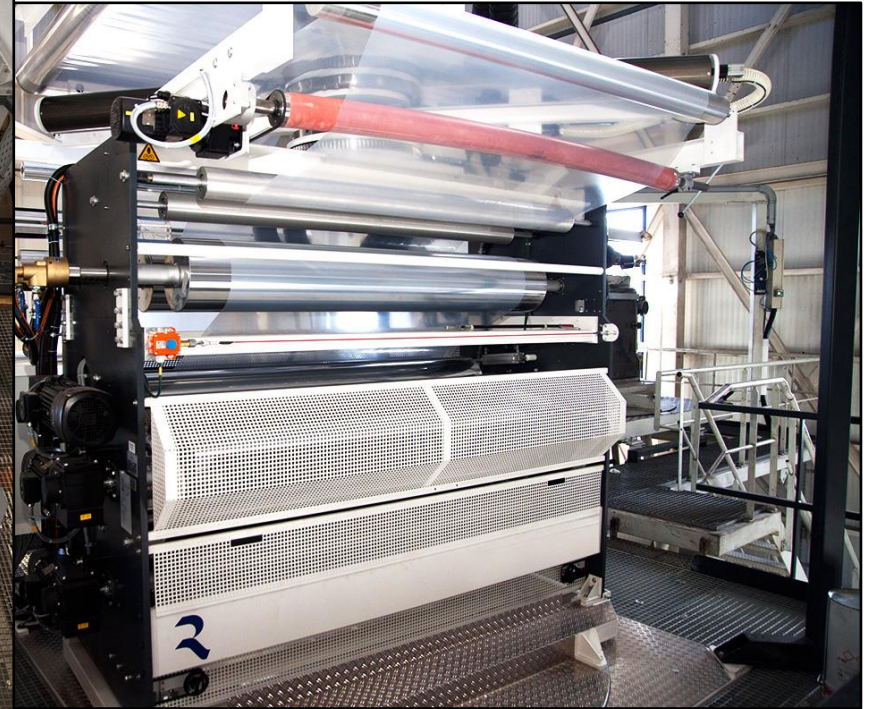
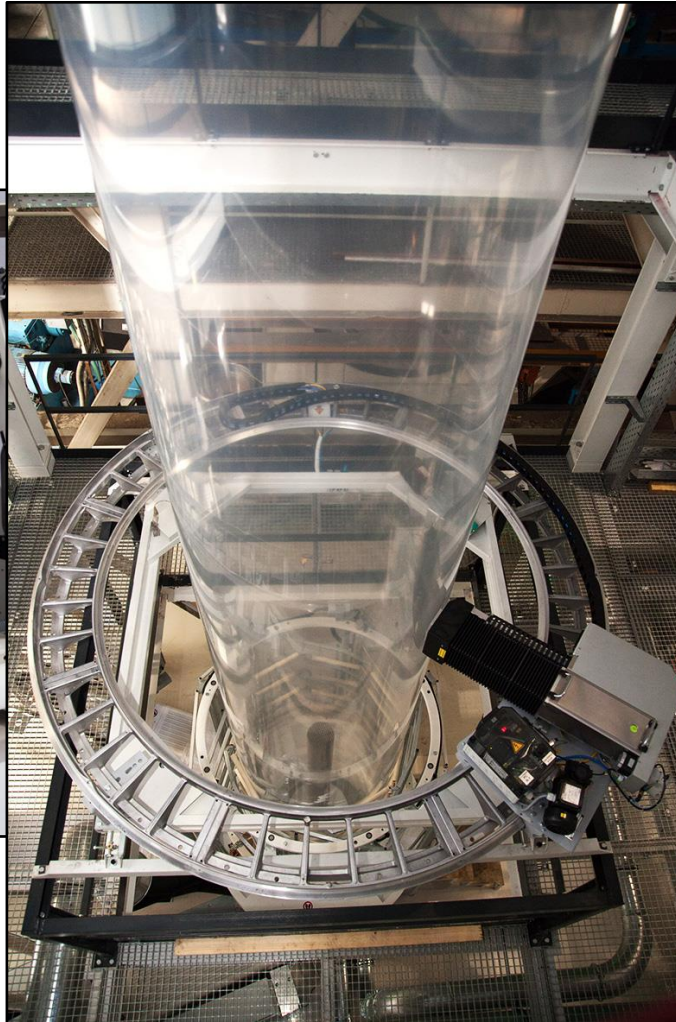
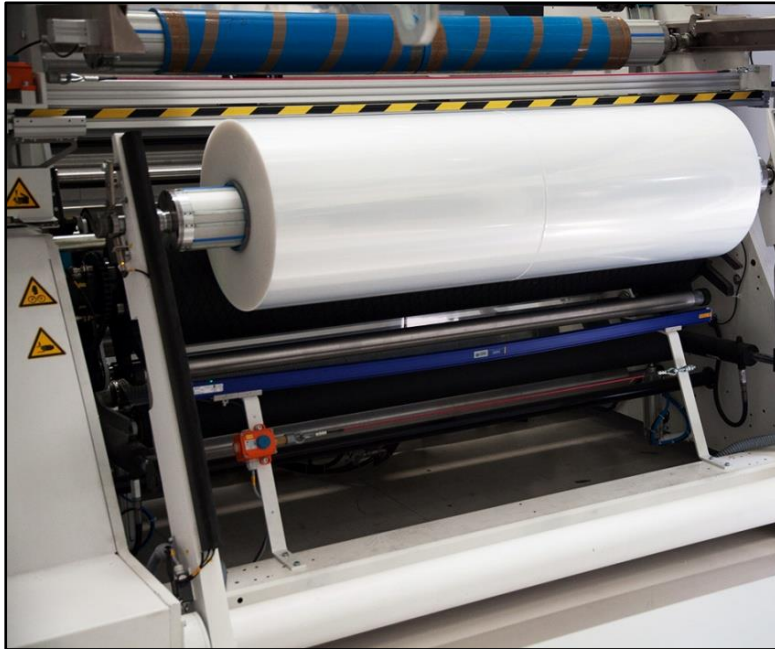
Controlled Production Environment



Production Units



Production Units



Production Units



Production Units



In Situ Recycling Units



Quality control

Quality Control

- Top quality raw materials (REACH / MSDS)
- Quality Management certification according to
 - ISO 9001:2015
 - ISO 22000:2005
 - ISO 14001:2015
- Suppliers' evaluation

EQC (Eurofilm Quality Control) according to accredited Standards

Thickness/ μm , Width/cm, Weight/g/qm,

Corona Treatment/dyn

ISO 527

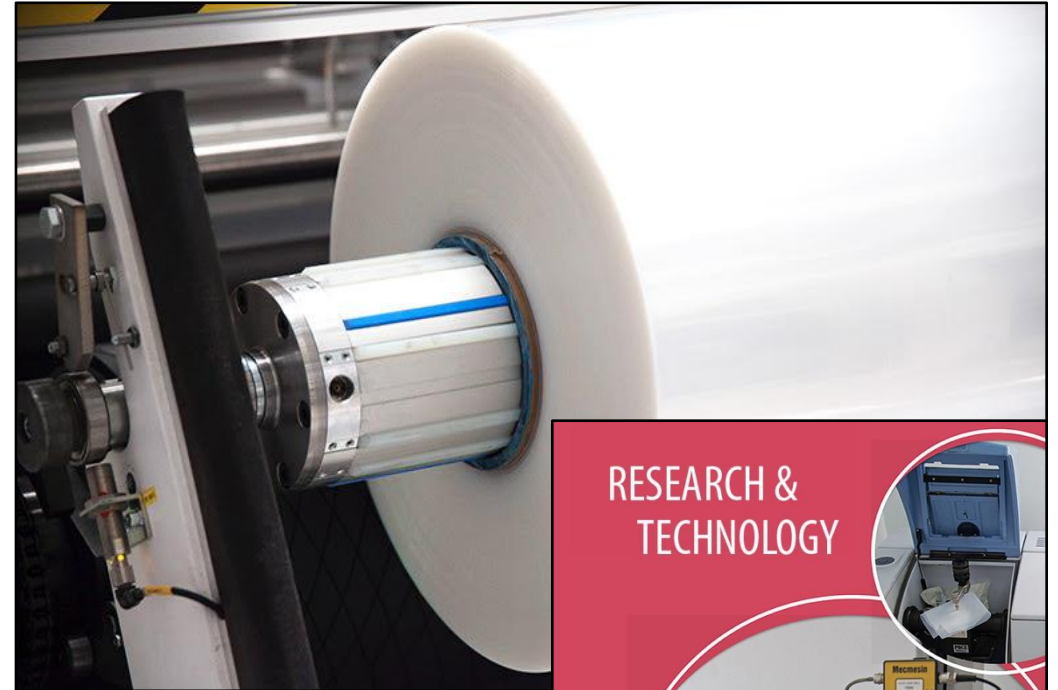
Tensile Strength MD-TD/N/qmm

Tensile Yield MD-TD/qmm

Elongation MD-TD/%

ISO 8295

Coefficient of Friction



Eurofilm Added Value Platform



Eurofilm Consumer Products



Consumer Products

Multilayer extrusion technology for printed and plain waste bags, carrier shopping bags, hygienic products, etc.



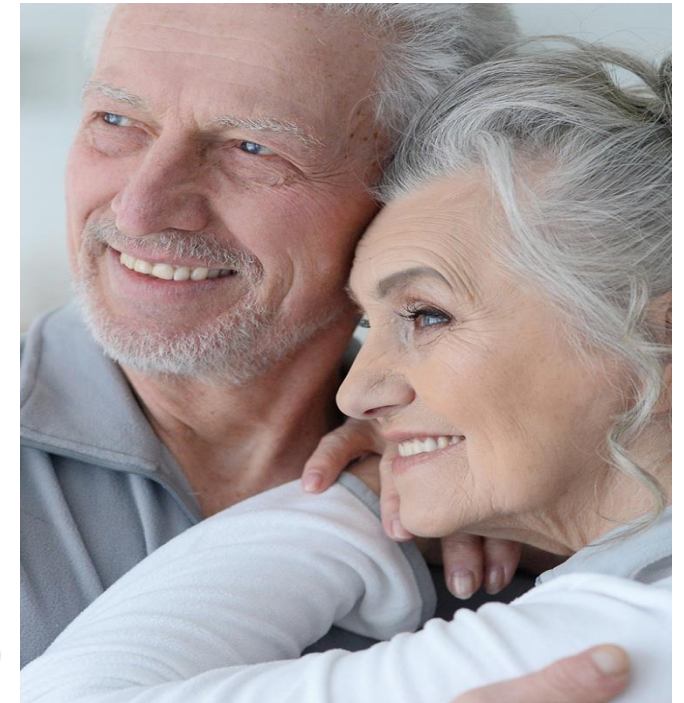
Eurofilm Consumer Products (Hygiene)

Personal Care Products

Materials for the manufacture of personal hygiene items such as diapers, sub-bands, etc. which we provide printed or imprinted. Choose from our available products.

Properties:

- high mechanical properties
- breathing capability
- exceptional sticking ability
- Rigidity
 - Widths: 20 cm - 100 cm
 - Thickness: 12µm - 25 µm
 - Up to 6 color printing
 - Corona Treatment

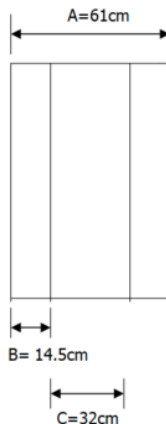


Eurofilm Consumer Products (Hygiene)

Eurofilm Mantzaris (Non – Breathable)			Lay - Flat			
Property	Direction	Unit	Standard	Hygiene 60/18	Hygiene 65/22	Hygiene 80/22
Width		cm	EQC*	60 +/- 1	65 +/- 1	80 +/- 1
Thickness		microns	EQC*	18 +/- 4%	22 +/- 4%	22 +/- 4%
Weight		g/m2	EQC*	18 +/- 4%	22 +/- 4%	22 +/- 4%
Density		g/cm3	ISO 527	1 +/- 0,7%	1 +/- 0,7%	1 +/- 0,7%
Tensile strength at Break	MD	N/mm2	ISO 527	16 +/- 2	19 +/- 2	19 +/- 2
	TD	N/mm2	ISO 527	13 +/- 2	15 +/- 2	15 +/- 2
Tensile Yield	MD	N/mm2	ISO 527	15 +/- 2	18 +/- 2	18 +/- 2
	TD	N/mm2	ISO 527	11 +/- 2	13 +/- 2	13 +/- 2
Elongation	MD	%	ISO 527	380 +/- 12%	440 +/- 12%	440 +/- 12%
	TD	%	ISO 527	590 +/- 12%	630 +/- 12%	630 +/- 12%
Friction Co-Eficient Untreated Area			ISO 8295	0,28-0,33		
Friction Co-Eficient Treated Area			ISO 8295	0,30-0,35		



Eurofilm Consumer Products (Hygiene)

Eurofilm Mantzaris (Non – Breathable)			Hygiene LD White 180/22 Gusset		
Property	Direction	Unit	Standard	90/61/22	
Width		cm	EQC*	180 +/- 0,7%	
Length A		cm	EQC*	61 +/- 1%	
Length B		cm	EQC*	14,5 +/- 2%	
Length C		cm	EQC*	32 +/- 2%	
Thickness		microns	EQC*	22 +/- 4%	
Weight		g/m2	EQC*	21,3 +/- 4%	
Density		g/cm3	ISO 527	0,97 +/- 0,7%	
Tensile strength at Break	MD	N/mm2	ISO 527	21 +/- 2	
	TD	N/mm2	ISO 527	14 +/- 2	
Tensile Yield	MD	N/mm2	ISO 527	19 +/- 2	
	TD	N/mm2	ISO 527	13 +/- 2	
Elongation	MD	%	ISO 527	420 +/- 12%	
	TD	%	ISO 527	650 +/- 12%	
Friction Co-Eficient Untreated Area			ISO 8295	0,29-0,35	
Friction Co-Eficient Treated Area			ISO 8295	0,28-0,34	



Eurofilm Consumer Products (Hygiene)

BREATHABLE FILM

MDO production line

Breathable film in various widths and thicknesses

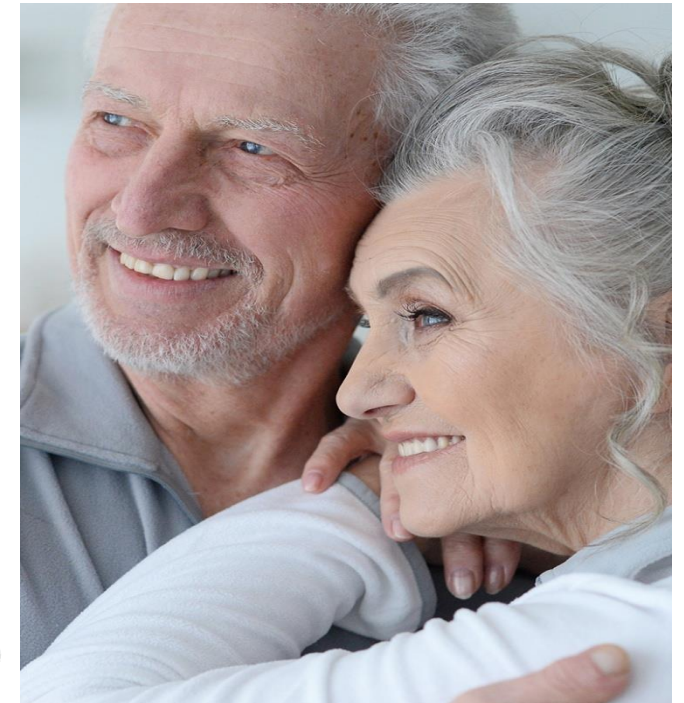
PE breathable film for diapers

WVTR (Lyssy g/m²/24h) for film 14 GSM = 2.079

Deviation of film thickness = +/- 5 to 7%

Tensile Strength at Break (MD) = 35 N/mm²

Coefficient of Friction = 0,23 – 0,28



Eurofilm Consumer Products (Hygiene)

Eurofilm Mantzaris			Hygiene LD Breathable White Lay Flat	
Property	Direction	Unit	Standard	80/15
Width		cm	EQC*	80 +/- 1%
Thickness		microns	EQC*	15 +/- 7%
Weight		g/m2	EQC*	15 +/- 4%
Density		g/cm3	ISO 527	1 +/- 0,7%
Tensile strength at Break	MD	N/mm2	ISO 527	25+/- 2
	TD	N/mm2	ISO 527	8+/- 2
Tensile Yield	MD	N/mm2	ISO 527	24,5 +/- 2
	TD	N/mm2	ISO 527	5,5 +/- 2
Elongation	MD	%	ISO 527	18
	TD	%	ISO 527	206
Friction Co-Eficient Untreated Area			ISO 8295	0,23-0,28
WVTR (lyssy, 38 C, 80%RH)		g/m2/day	WSP 70.6	2000-3000

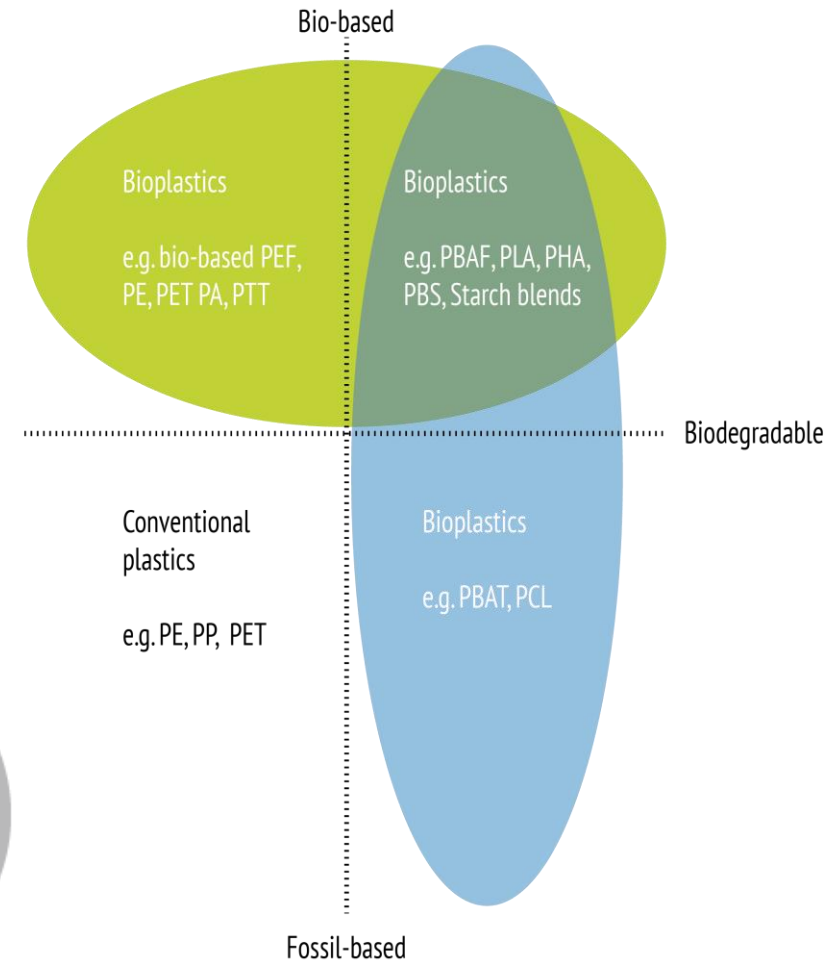


Eurofilm Consumer Products (Hygiene)

Moving towards a Green Bio Friendly future

Eurofilm actively invests in R&D focused in the promotion of **Bio Based** Raw materials suitable to follow EN 13432 requirements for:

- Compostable
- Home Compostable



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