

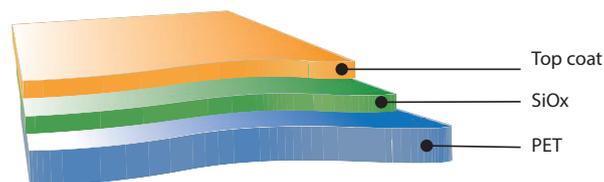


Techbarrier® LS

High barrier film with top coat

Techbarrier® LS is a film based on PET, SiOx and a special top coat with extraordinary barrier properties. Prevention of permeation of gases like oxygen and water vapor even after retort. Due to our unique technology the film keeps its high barrier properties after bending and gelbo-flex exposure, which improves the shelf-life of your product. The top coat provides easy printing and anti-scratching surface.

Layer structure of Techbarrier® LS

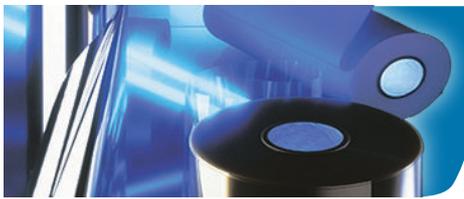


Typical properties

Property	Thickness μm	Units	Value		Test Method Reference	Test Conditions
			MD	TD		
MECHANICAL						
Tensile strength	12	MPa	220	230	JIS K-7127	-
Elongation at break	12	%	110	110	JIS K-7127	-
THERMAL						
Shrinkage (dry)	12	%	2.0	0.1	JIS K-7133	200°C, 3 min
OPTICAL						
Haze	12	%	4.0		JIS K-7136	-
Light Transmission	12	%	89		JIS K-7361-1	
BARRIER						
Oxygen **	12	$\text{cc}/(\text{m}^2 \times \text{d} \times \text{atm})$	0.1		JIS K-7126	25°C, 80% r.h.
	12	$\text{cc}/(\text{m}^2 \times \text{d} \times \text{atm})$	0.3		Retort	125°C, 30 min
Water vapour**	12	$\text{g}/(\text{m}^2 \times \text{d})$	0.15		JIS Z-0222	40°C, 90% r.h. after storage for 2 weeks under mea- surement conditions
	12	$\text{g}/(\text{m}^2 \times \text{d})$	0.3		Retort	125°C, 30 min

* MD = Machine direction, TD = Transverse direction

** Measured on laminated films - Structure LS (12) / BOPA (15) / CPP (60)



Delivery program Techbarrier® LS

Thickness μm	Yield		Roll length <i>m</i>	Roll- diameter <i>mm</i>
	g/m^2	m^2/kg		
12	17	60	On request	On request

Attention:

- Tensile strength should be low, preferably less than 10 Kg / 1000mm.
- We recommend to use moisture proof packaging after laminating and pouching.

This data sheet reflects our state of knowledge at the time this was prepared. The purpose is to provide an overview of the characteristics of our products and their potential uses. It neither guarantees specific properties nor the suitability of products in specific applications. The user must observe industrial property rights, such as patents or trademarks. The quality of our products is covered by the terms of the General Conditions of Sale of MITSUBISHI POLYESTER FILM GmbH.