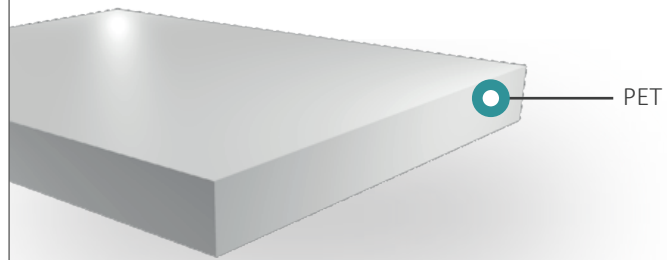


# Lumirror® F65F

## Application

- Hot stamping
- Cold stamping
- Security



SYMMETRICAL  
HAZY PET FILM

## Benefits

- Low shrinkage at high temperature
- Excellent mechanical properties
- Specific micro-roughness on both sides
- Based on Toray Worldwide standard for hot stamping process

## Typical Values *(These values do not constitute binding specifications)*

Properties	Test Method	Unit	12 µm	15µm	19µm	23 µm
<b>YIELD</b>						
Unit Weight		g/m <sup>2</sup>	16.8	21.0	26.6	32.2
Area Yield		m <sup>2</sup> /kg	59.5	47.6	37.6	31.1
<b>MECHANICAL</b>						
Tensile Strength MD	ASTM D 882	daN/mm <sup>2</sup>	20	19	20	20
Tensile Strength TD			25	23	23	24
Elongation at Break MD	ASTM D 882	%	130	120	130	130
Elongation at Break TD			90	90	110	95
<b>THERMAL</b>						
Shrinkage 150°C 30mn MD	Internal Method	%	1.5	1.3	1.3	1.4
Shrinkage 150°C 30mn TD			0.0	0.3	0.3	0.0
Shrinkage 190°C 20mn MD	Internal Method	%	3.5	3.5	3	3.3
Shrinkage 190°C 20mn TD			0.5	0.35	0.1	0.25
<b>OPTICAL</b>						
Gardner Haze	ASTM D1003	%	3.1	4	5	4.5
<b>SURFACE</b>						
Roughness Ra	Internal method	nm	30	30	30	28
Roughness Rz			300	330	320	310

## Regulation

Lumirror® F65F does **not** comply with European applicable requirements for food contact applications. For Toray's certification concerning specific applications with each product, please refer to the 'Declaration of Compliance'.

## Presentation of the rolls

**Roll packaging:** The rolls are suspended on standard paper core with internal diameter of 152.8mm. For all presentation, minimum roll width = 340mm and maximum roll width = 2100mm.

**Returnable packaging:** Wooden flanges, plastic flanges and pallets are returnable.

## Please contact us for...

- Any other presentation (width, length, core)
- Process for returnable packaging
- Any other information about typical values, measuring conditions, tolerances, deliveries...

Lumirror® is a registered trademark of Toray Films Europe SAS - TFE September 2020

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