



## PLEXIGLAS® Films for Microfluidic Applications

### Preliminary Product Description

#### High transmission

PLEXIGLAS® films for microfluidic applications provide excellent light transmission and brilliance due to a low intrinsic absorption. PLEXIGLAS® Films OF301 is especially suitable to perform for analytics in the UV spectrum.

Transmission OF301 > 90 % (315 nm)  
Transmission OF302 ≈ 12 % (315 nm)

#### Biocompatibility

PLEXIGLAS® is known for its very good biocompatibility as its use is well established in diagnostics applications.

#### Hydrophilicity

PLEXIGLAS® has the highest surface energy amongst other polymers used in microfluidics. This allows a laminar flow in the micro channels.

#### Processability

Both PLEXIGLAS® films can be easily processed by laser cutting and die cutting.

#### Bonding-process

The following bonding-processes are suitable:

- Thermal bonding
- Solvent bonding
- Laser welding
- Ultra sonic welding

### Services

#### Clean-room conditions

An important point for microfluidic devices: Röhm has the possibility to produce under cleanroom conditions.

#### Masking-films on both sides

Masking-films can be applied per customer's needs.

#### In-house cutting

The customer asks and Röhm delivers. In-house cutting by Röhm allows customers to have their individual requirements met. The customer receives an all-in-one quality product and service by Röhm.



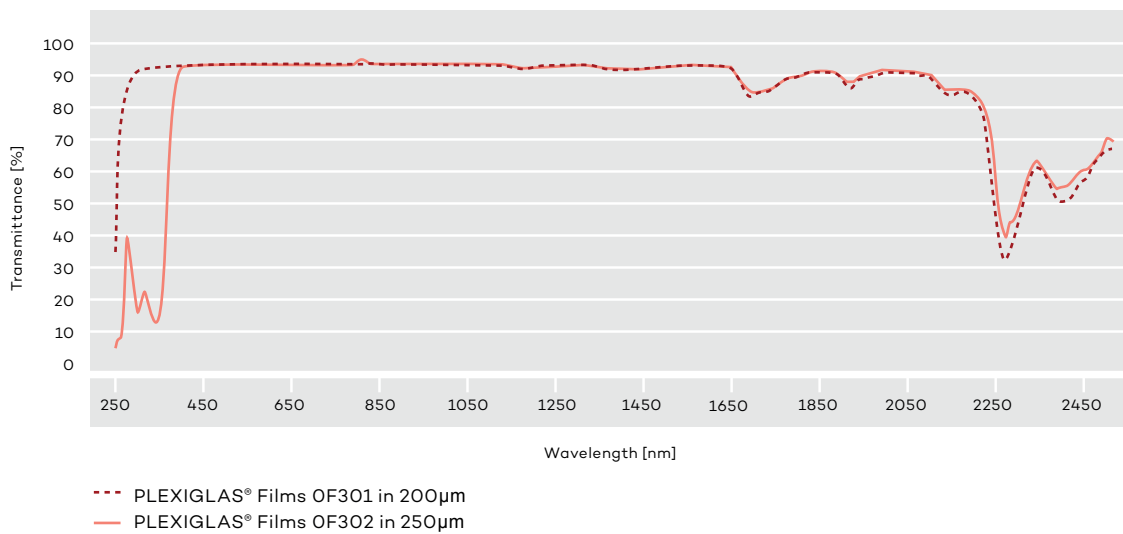
### Available PLEXIGLAS® film thicknesses

	PLEXIGLAS® Films OF301	PLEXIGLAS® Films OF302
<b>Thickness µm</b>	80, 200, 375, 500	175, 250, 375, 500

## Technical Data

Properties	Unit	Parameter	Standard	Values	
				PLEXIGLAS® Films OF301 in 200 µm	PLEXIGLAS® Films OF302 in 250 µm
Light transmittance	(%)	D65/10°	DIN EN ISO 11664	92.5	92.3
UV transmittance	(%)	(280–380)	DIN EN ISO 410	91.8	12.2
Haze	(%)	@23 °C	ASTM D1003	0.2	1.2
Refractive index	–	@23 °C	DIN EN ISO 489	1.49	1.49
Glass transition temp. (T <sub>g</sub> )	°C	(10 °C/min)	DIN EN ISO 11357	110	111
Max. water absorption	(%)	@23 °C	DIN EN ISO 62	1.9	2.1
Surface tension	(mN/m)	@23 °C	DIN ISO 8296	44–45	43–44
Tensile yield stress (σ <sub>y</sub> )	MPa	–	DIN EN ISO 527-3	80	55
Nominal tensile strain at break (ε <sub>1B</sub> )	(%)	–	DIN EN ISO 527-3	6	59
Yield strain (ε <sub>y</sub> )	(%)	–	DIN EN ISO 527-3	–	55
Density	(g/cm <sup>2</sup> )	–	DIN EN ISO 1183	1.19	1.17

## Transmittance





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® = registered trademark

PLEXIGLAS is a registered trademark of Röhm GmbH, Darmstadt, Germany.  
Certified to DIN EN ISO 9001 (Quality) and DIN EN ISO 14001 (Environment)

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